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Public Hearing – January 28, 2020  
Groundwater Withdrawal Special Exception – GW0078700  
Chickahominy Power  
Statement of Chickahominy Power in Support of Application

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Chickahominy Power, LLC is pleased to be afforded the opportunity to offer this statement to the Virginia State Water Control Board in support of our project being developed in Charles City County. The proposed facility will be one of the most efficient and environmentally clean power generating facilities in the region and is anticipated to displace older, less efficient and less environmentally clean facilities. The technologies being utilized by the Chickahominy Power facility are THE most advanced and efficient available in the market today.

We recognized early on that the proposed location in Charles City County will necessitate efficient use of water. In response, we have designed the Chickahominy Power plant to use the least amount of water possible, which represents the principal foundation of our Water Conservation and Management Plan, included as Section D of Part 1 of the proposed Special Exception Permit. This has been achieved most notably through the use of air-cooled condenser technology, in lieu of more conventional water-cooling technology, but also through an extensive use of water recapture and wastewater recovery systems.

As a comparison of how the Chickahominy Power project compares locally and nationally in its water demands, we offer the following. The Chickahominy plant average water use of 57.1 gallons per minute and the proposed plant power output of 1,600 megawatts yield a demand of 0.002 gallons/kilowatt-hour. A United States Energy Information Administration publication titled *"Today in Energy – Water Withdrawals by U.S. Power Plants Have Been Declining"*, the average national water usage demand by power generation in 2017 was 13.0 gallons/kilowatt-hour – over 6,000 times the amount of water Chickahominy will use. Water demand in Virginia was reported to be in the range of 20 to 30 gallons/kilowatt-hour, which on the low end of the estimate is still 10,000 times more water than Chickahominy will use. This positions the water demand for the Chickahominy Power facility dramatically lower than these national and Virginia averages.

A further example of the successful steps taken to minimize the environmental footprint of the project, it should be noted that if the Chickahominy Power project had been based upon more conventional water-based cooling technologies, the average water demand would have approached 6 billion gallons per year. Through the use of air-cooling technology, water demand has been reduced to 30 million gallons per year, a reduction of 99.5%.

In closing, we are proud of the steps taken to minimize the environmental impacts of our Project on all fronts. We truly believe it will rank as one of, if not the most environmentally responsible generation projects in the nation, and one that Virginia will point to as representing a positive and supportive step in helping transition to a more robust renewable portfolio of power generation for the Commonwealth.

We urge approval of Groundwater Withdrawal Special Exception Permit GW0078700.

Thank you for allowing me to speak tonight.



## Board of Supervisors

Thomas W. Evelyn	District 1
C. Thomas Tiller, Jr.	District 2
Patricia A. Paige	District 3
Ron Stiers	District 4
John N. Lockwood	District 5

Rodney A. Hathaway  
County Administrator

[www.co.new-kent.va.us](http://www.co.new-kent.va.us)

February 4, 2020

Mr. J.E. (Jef) Freeman, Jr.  
Director - Development  
Chickahominy Power, LLC  
13800 Coppermine Road, Suite 115  
Herndon, VA 20171

Re: Amendment to Potable Water Supply Agreement

Dear Mr. Freeman:

The New Kent County Board of Supervisors, at its January 29, 2020 meeting, approved an amendment to the potable water supply agreement dated April 24, 2019 between New Kent County and Chickahominy Power. A fully executed original of the amendment is enclosed.

If you have any questions, please do not hesitate to contact this office.

Sincerely yours,

Wanda F. Watkins, CMC  
Deputy Clerk of the Board

enclosure

cc: County Attorney (with original Agreement)  
Larry Dame, Director of Public Utilities (with copy)  
Finance (with copy)

**AMENDMENT TO  
POTABLE WATER SUPPLY AGREEMENT**

THIS AMENDMENT TO POTABLE WATER SUPPLY AGREEMENT, is made and entered into as of January 29, 2020 (this "Amendment"), by and between New Kent County, a political subdivision of the Commonwealth of Virginia ("County") and Chickahominy Power, LLC, a limited liability company organized under the laws of the Commonwealth of Virginia ("Company").

**RECITALS**

**WHEREAS**, County and Company are parties to into that certain Potable Water Supply Agreement, dated as of April 24, 2019 (the "Agreement"); and

**WHEREAS**, County and Company mutually desire to amend the Agreement as provided in this Amendment.

**NOW, THEREFORE**, in consideration for the premises and mutual agreements contained herein, the Parties hereby amend the Agreement as follows:

1. Defined Terms. Capitalized terms used herein without definition shall have the meanings ascribed to them in the Agreement.
2. Amendment. Section 2 C. of the Agreement is hereby amended by deleting both appearances of "April 30, 2024" and replacing them with "April 30, 2027."
3. Ratification of Agreement. Except as otherwise provided in this Amendment, all of the terms, representations, warranties, agreements, covenants and other provisions of the Agreement are hereby ratified and confirmed and shall continue to be in full force and effect in accordance with their respective terms.
4. Governing Law. This Amendment shall be governed by and construed in accordance with the laws of the Commonwealth of Virginia, exclusive of any conflict of laws provisions thereof that would apply the laws of another jurisdiction.
5. Headings. The headings of the Sections of this Amendment are inserted for convenience only and shall not be deemed to affect the construction hereof.
6. Entire Agreement; Supersedure. This Amendment contains the entire agreement among the Parties with respect to the subject matter hereof and supersedes all previous understandings or agreements among the parties, whether oral or written, with respect to the subject matter.

[THE REMAINDER OF THIS PAGE IS INTENTIONALLY LEFT BLANK]



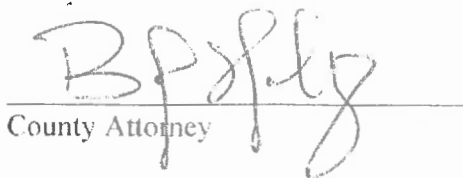
IN WITNESS WHEREOF, each of the parties hereto has caused this Amendment to be executed on its behalf as of the date first above written.

NEW KENT COUNTY, VIRGINIA



Rodney Hathaway  
County Administrator

Approved as to form:

  
County Attorney

CHICKAHOMINY POWER, LLC

By: J.E. (Jef) Freeman, Jr.

Name: J.E. (Jef) Freeman, Jr.

Title: Director - Development

## POTABLE WATER SUPPLY AGREEMENT

THIS AGREEMENT FOR POTABLE WATER SUPPLY ("Agreement"), is made and entered into this <sup>24</sup>~~21~~ day of April, 2019 (the "Effective Date"), by and between New Kent County, a political subdivision of the Commonwealth of Virginia, ("County") and Chickahominy Power, LLC, a limited liability company organized under the laws of the Commonwealth of Virginia ("Company").

### RECITALS

WHEREAS, the Company intends to construct and operate a power generating plant in Charles City County ("Project") which requires an annual supply of 30 million gallons of potable water; and

WHEREAS, the Company is willing to construct at its own expense all the facilities necessary to transport water from New Kent County's existing county water mains to the site of its proposed power plant; and

WHEREAS, the County is willing to supply potable water to the Company in accordance with the terms and conditions hereof.

NOW, THEREFORE, for and in consideration of the foregoing, the mutual covenants and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties hereto hereby agree as follows:

1. Sale and Purchase of Potable Water.

A. Sale and Purchase.

Commencing on the Commencement Date, the County agrees to sell to the Company and the Company agrees to pay for potable water in the available amounts described herein.

B. Delivery of Water.

The County agrees to deliver the potable water to the Company at the County's water main tie in at the end of the existing 12" water main on the west side of Route 106, Emmaus Church Road just south of Jimmy Burrell Lane in the County of New Kent. Water shall be available to be delivered uniformly 24 hours a day, 7 days a week, 365 days per year. The County shall install a water meter to be located on the west side of State Route 106 (Emmaus Church Road) just prior to the State Route 106 bridge over the Chickahominy River for the purpose of metering the water consumption used by the Company pursuant to this Agreement.

C. Company's Obligations.

The Company shall construct at its own expense all the facilities necessary to connect to the County's existing water mains and to transport water from the County's existing water mains to the site of the Company's proposed power plant (the "Facilities"). The Company shall construct the Facilities and all such construction shall conform in all material respects with the plans and specifications prepared by the Company and approved by the County (the "Specifications"). The Company shall be responsible for and obtain all the permits and rights of way necessary, whether in New Kent County or Charles City County, to construct all the facilities related to the purchase of potable water under this Agreement, including any necessary agreements with Charles City County. Without limiting the foregoing, the County agrees that the Company may utilize the County's right of way use agreement with the Virginia Department of Transportation at no cost to

the Company upon the consent and approval of the Virginia Department of Transportation. Once complete and accepted by New Kent County, the new 12" water main, all fire hydrants and other necessary appurtenances within the New Kent County borders up to the water meter to be used for metering the water consumption, shall be owned New Kent County and the Company shall execute the necessary paperwork to transfer ownership and maintenance responsibility for all such facilities to New Kent County Public Utilities. All water mains, fire hydrants, and other necessary appurtenances located in Charles City County and to the Charles City side of the water meter used for metering the water consumption shall be owned and maintained by the Company or its successor and assigns.

2. Term of Agreement; Commence Date; Termination.

- A. The term ("Term") of this Agreement shall commence on the Effective Date and shall continue for as long as the County's Groundwater Withdrawal Permit remains in effect, subject to termination as provided in Section 2.C. For the avoidance of doubt, the Term shall automatically extend for any renewals of the Groundwater Withdrawal Permit unless the Company gives notice of non-renewal at least 180 days prior to the expiration of the then current term.
- B. The County's obligation to supply potable water as provided in this Agreement shall commence on the date (the "Commencement Date") which is the later of (i) the date that the County has obtained approval from the Virginia Department of Environmental Quality for the County's ground water withdrawal permit renewal application number GW0006701 (Central Water System) ("Groundwater Withdrawal Permit") or (ii) the date that the Company has, at its own expense, constructed all of the Facilities and connected to the County water main tie in at the end of the existing 12" water main on the west side of Route 106, Emmaus Church Road just south of Jimmy Burrell Lane in the County of New Kent.
- C. This Agreement may be terminated for convenience by the County in the event that the Company has not constructed the facilities necessary to transport water to the Project and connected the Project to the County's water main by April 30, 2024. If the County terminates this agreement because the Company has not constructed the facilities and connected to the County's water main by April 30, 2024, then the Company shall reimburse the County for its external costs associated with obtaining the renewal of the Groundwater Withdrawal Permit in an amount not to exceed \$10,000.

3. Quantity of Water.

The County shall provide potable water to the Company in the amounts requested by the Company during the Term of this Agreement in accordance with and subject to the following limits:

A. Annual Base Supply.

The County will supply the Company with up to thirty million (30,000,000) gallons of potable water each fiscal year starting July 1<sup>st</sup> and ending June 30<sup>th</sup> of the following year ("Fiscal Year").

B. Excess Supply.

In the event the Company requires more than thirty million (30,000,000) gallons of potable water in a given Fiscal Year, the County agrees to make available to the Company an additional ten million (10,000,000) gallons of potable water ("Excess Water"). In no event

shall the total potable water supplied to the Company in any Fiscal Year exceed forty million (40,000,000) gallons.

C. Daily Contract Quantity Limit.

The daily contract quantity limit shall be one hundred twenty-five thousand (125,000) gallons of potable water in any one calendar day.

D. Notice for Planning Purposes.

The Company shall give non-binding notices for planning purposes to the County regarding its expectation of potable water needs during each upcoming two (2) month period.

4. Purchase Price.

A. Base Purchase Price.

During the first five years of the Term of this Agreement, the Company shall pay a base purchase price of five dollars (\$5.00) per thousand (1,000) gallons ("Base Purchase Price") for the supply of 30 million (30,000,000) gallons of potable water each Fiscal Year. The Company agrees to pay for 30 million (30,000,000) gallons of potable water each Fiscal Year regardless of whether the Company actually used the full amount of potable water, prorated for any partial Fiscal Year during the Term. The Base Purchase Price shall be payable in arrears in six equal bi-monthly installments of Twenty-Five Thousand Dollars (\$25,000), commencing at the end of the second month after the Commencement Date.

Commencing on the sixth anniversary of the Commencement Date and each anniversary thereafter, the Base Purchase Price shall be increased to the greater of (i) the Base Purchase Price increased by the percentage increase in the CPI for the latest twelve months for which statistics are available compared to the amount charged for the previous year or (ii) the then current bulk potable water rate as set by the Board of Supervisors of the County of New Kent. For purposes of this section, "CPI" shall mean the All Items Consumer Products Index for All Urban Consumers for the U.S., City Average, 1882-1984=100, as published by the U.S. Department of Labor, Bureau of Labor Statistics (or the successor thereto). The calculation shall take place on or before July 1 of each year or such later time as the CPI is available for the prior year. The price adjustment shall take effect on July 1. If the CPI is not available then, the parties shall apply the adjustment retroactively to July 1 when it does become available.

B. Excess Purchase Price.

At the end of each of the first five Fiscal Years of the Term, meter readings will be calculated and any Excess Water used by the Company during a Fiscal Year will be billed at a rate of Eight Dollars and Thirty-Three Cents (\$8.33) per Thousand gallons ("Excess Purchase Price"). Commencing on the sixth anniversary of the Commencement Date and each anniversary thereafter, the Excess Purchase Price shall increase by the same percentage as any increase provided in this Agreement for the Base Purchase Price applicable to the same Fiscal Year.

C. Invoices; Payment.

The County shall invoice the Company bi-monthly in arrears for all Base Purchase Price amounts. All invoices shall be due and payable within forty-five (45) days. The invoice shall list the amount of water delivered by the County as measured by the County's water meter. Following the end of each Fiscal Year, the County shall provide an invoice for any amounts due for any Excess Water.

D. Connection Fee and Meter Fee.

The Company shall pay a connection and meter fee to the County at the time of the connection to the County's existing water mains based on the size of the meter as outlined in Section A of the New Kent County Code.

5. Availability of Water.

A. Lack of Water.

The County's obligation to supply potable water to the Company pursuant to this Agreement shall be limited to the extent of (i) an emergency that prevents the County from delivering the water to the Company, (ii) a drought that results in a lack of sufficient water supply, or (iii) the County is prohibited by law from providing water to the Company.

B. Repairs, Extensions and Other Work.

Subject to the notice provisions of Section 9, water service to the Company may be temporarily interrupted by the County for the purposes of repairing, extending, or performing other work necessary to the County's water system.

C. Duration of Reduced Use.

The County shall use its best efforts to minimize the duration of any interruptions in the provision of water to the Company.

D. Coordination with Company.

With regard to any change, reduction, limitation, discontinuance or interruption in water service, the County shall take all steps practicable and reasonable in coordination with the Company to minimize the negative impacts upon Company operations.

6. Indemnification.

A. Indemnification by the Company for Construction Activities.

The Company shall indemnify and hold the County harmless from any and all claims, actions, and judgments to the extent arising out of or resulting from the construction of the Facilities, provided that such claim, action, or judgment is attributable to bodily injury, sickness, disease or death, or injury to or destruction of tangible property (other than the Facilities themselves), but only to the extent caused by the negligent acts or omissions of the Company, a contractor of the Company, anyone directly or indirectly employed by them or anyone for whose acts they may be liable, regardless of whether or not such claim, action or judgments is caused in part by the County.

B. Indemnification by the Company for Violations of Law.

In addition to the Company's indemnity and hold harmless obligations under Section 6.A., the Company shall indemnify and hold the County harmless against all fines, penalties, damages, liability, costs, expenses and punitive damages (if any) to the extent arising out of or caused by any (i) violation of or a failure to comply with any law, statute, ordinance or requirement of a public authority that bears upon the construction of the Facilities by the Company under this Agreement or (ii) failure to secure and pay for permits, fees, approvals, licenses and inspections, or any violation of any permit or other approval of a public authority applicable to the construction of the Facilities by the Company, a contractor of the Company, anyone directly or indirectly employed by them or anyone for whose acts they may be liable.

7. Prohibition of Resale.

Potable water provided to the Company pursuant to this Agreement shall not be resold by the Company to any other person, company or entity.

8. Meters.

The County shall maintain any and all necessary water meters for measuring the amount of potable water delivered by the County to the Company. The County shall perform calibration and testing of the water meter used for metering consumption of the Company at least once per calendar year and, upon request of the Company, shall perform additional calibration and testing of such water meter at the Company's sole cost and expense, in each case with the Company having the right to witness each such calibration and testing

9. Notice of Down Times and Interruptions.

The Company and the County shall insofar as reasonably practicable each give the other thirty (30) days' notice of the dates and anticipated duration of any maintenance, shut downs, or operations that will affect the delivery or use of water provided for in this Agreement. The parties recognize that emergencies or other operating interruptions may reduce or even eliminate the ability of a party to give notice as provided herein; in such event, the parties shall provide such notice as circumstances then reasonably allow. The parties will consult and coordinate to minimize down times and interruptions of service hereunder.

10. Excuse from Performance by Government Acts.

This Agreement is contingent upon the County receiving a renewal of its Groundwater Withdrawal Permit to supply potable water to the Company. If for any reason during the Term, local, state, or federal governments or agencies revoke or fail to issue necessary permits, including but not limited to renewal of the Ground Water Withdrawal Permit, fail to grant necessary approvals, or require any change in the operation of the transmission and distribution systems for potable water or the application and use of potable water provided by the County, then to the extent that such requirements shall affect the ability of the County to perform any of the terms of this Agreement, the County shall be excused from the performance thereof.

11. Amendments.

No change, amendment or modification of any provision of this Agreement shall be valid unless set forth in a written amendment to this Agreement signed by the parties.

12. Governing Law; Jurisdiction.

The rights and obligations of the parties under the Agreement shall be governed by, and construed in accordance with, the laws of the Commonwealth of Virginia and of the United States, without giving effect to the principles of Virginia law relating to the conflict or choice of laws. Any legal action, suit or proceeding brought by a party that in any way arises out of this Agreement ("Proceeding") must be litigated exclusively in the United States District Court for the Eastern District of Virginia (Richmond Division) or the Circuit Court of the County of New Kent, Virginia (the "Identified Courts"). Each party hereby irrevocably and unconditionally: (i) submits to the jurisdiction of the Identified Courts for any Proceeding; (ii) shall not commence any Proceeding, except in the Identified Courts; (iii) waives, and shall not plead or make, any objection to the venue of any Proceeding in the Identified Courts; (iv) waives, and shall not plead or make, any claim that any Proceeding brought in the Identified Courts has been brought in an improper or otherwise inconvenient forum; and (v) waives, and shall not plead or make, any claim that the Identified Courts lack personal jurisdiction over it.

13. Additional Terms of the Agreement.

A. Force Majeure.

If because of Force Majeure either party is rendered wholly or partially unable to carry out its respective obligations under this Agreement, and if such party promptly gives the other party written notice of such Force Majeure, the obligations and liabilities of the party giving such notice and the corresponding obligation of the other party shall be suspended to the extent made necessary by and during the continuance of such Force Majeure; provided, however, that the party claiming Force Majeure shall use its best efforts to eliminate the cause or effect of Force Majeure as soon as and to the extent possible, except that labor disputes or strikes shall be settled at the sole discretion of the party affected. Conditions of Force Majeure include, but are not necessarily limited to: flood, earthquake, explosion, acts of God, acts of a public enemy, strikes, labor disturbance, or government regulations.

B. Counterparts.

This Agreement may be executed in two or more fully executed copies, each of which shall be deemed an original, and it shall not be necessary in making proof of this Agreement or the terms hereof to produce or account for more than one of such original copies. This Agreement may be executed and transmitted electronically in counterparts, all of which taken together shall constitute one Agreement between the parties. Signed facsimile or pdf versions of the Agreement shall be deemed originals for all purposes.

C. Written Notices.

Under this Agreement, if one party is required to give written notice to the other, such written notice shall be sent by registered or certified mail, postage prepaid and return-receipt requested, or by Federal Express or other expedited carrier providing evidence of delivery, and addressed as:

(i) If to Company:

Mr. Irfan K. Ali  
Managing Member  
Chickahominy Power, LLC  
13800 Coppermine Road, Suite 115  
Herndon, VA 20171

With a copy to:

General Counsel  
Chickahominy Power, LLC  
13800 Coppermine Road, Suite 115  
Herndon, VA 20171

(ii) If to the County:

Director of Public Utilities  
New Kent County  
7051 Poindexter Road  
New Kent, Virginia 23124  
Attention: Lawrence A. Dame

With a copy to:

Office of the County Attorney  
P. O. Box 150  
12007 Courthouse Circle  
New Kent, VA 23124

D. Entire Agreement.

This Agreement and the exhibits attached hereto (and by this reference made a part hereof) constitute the entire Agreement between the parties, and there are no understandings or agreements relative hereto other than those which are expressed herein, and no change, waiver, or discharge hereof shall be valid unless it is in writing and is executed by the party against whom such change, waiver, or discharge is sought to be enforced.

E. Waiver.

The failure of either party to insist upon strict compliance of any provisions of this Agreement shall not act as a waiver of any of its rights, unless expressed in writing by one party granting the waiver.

F. Assignment.

Company shall not, without the prior written consent of the County, assign this Agreement. Provided, however, Company may assign this Agreement without the prior written consent of the County, to any (a) parent, subsidiary, affiliate, division or corporation controlled by or under common control of Company, or (b) a successor entity related to Company by reorganization, merger, consolidation or the sale of all or substantially all of the capital stock or assets of the Company (or any other transaction substantially similar in effect).

G. Severability.

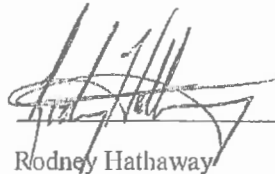
If any portion of this Agreement shall be adjudged as invalid or illegal, it shall be severable leaving the balance of this Agreement intact.

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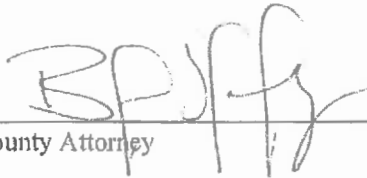
IN WITNESS WHEREOF the parties have executed this Agreement as of the day and year first above written.

NEW KENT COUNTY, VIRGINIA



Rodney Hathaway  
County Administrator

Approved as to form:



County Attorney

CHICKAHOMINY POWER, LLC

By J.E. (Jef) Freeman, Jr.

Name: J.E. Freeman, Jr.

Title: Director - Development  
Balico, LLC

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**Chickahominy Power, Groundwater Withdrawal Special Exception #GW0078700**

message

**redl@skybest.com** <bredl@skybest.com>

Thu, Feb 13, 2020 at 12:52 AM

o: withdrawal.permitting@deq.virginia.gov

c: district37@senate.virginia.gov, district18@senate.virginia.gov, district23@senate.virginia.gov, district03@senate.virginia.gov, district05@senate.virginia.gov

Joseph Grist

Department of Environmental Quality

Central Office, 1111 E. Main Street, Suite 1400

Richmond, VA, 23219

Phone: 804-698-4031

E-mail: withdrawal.permitting@deq.virginia.gov

RE: Chickahominy Power, Groundwater Withdrawal Special Exception #GW0078700

Plant Location: 6721 Chambers Road, Charles City, VA 20203

Dear Mr. Grist, Mr. Paylor and Members of the Water Control Board:

On behalf of the Blue Ridge Environmental Defense League and our chapters' members in Virginia, I write to request that you deny the special exception to the Groundwater Management Act requested by Chickahominy Power, LLC. Please find my comments attached.

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Louis A Zeller

Executive Director

Blue Ridge Environmental Defense League, Inc.

Offices in Virginia, North Carolina, Tennessee and Georgia

Phone: 1-336-982-2691

Email: BREDL@skybest.com

Website: [www.BREDL.org](http://www.BREDL.org)

Founded in 1984, we have projects and chapters in Alabama, Georgia, Tennessee, South Carolina, North Carolina and Virginia



**200213\_Chickahominy Power, Groundwater Withdrawal Special Exception #GW0078700.pdf**

372K

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# Blue Ridge Environmental Defense League

www.BREDL.org PO Box 88 Glendale Springs, North Carolina 28629 BREDL@skybest.com (336) 982-2691

February 13, 2020

Joseph Grist  
Department of Environmental Quality  
Central Office, 1111 E. Main Street, Suite 1400  
Richmond, VA, 23219  
Phone: 804-698-4031  
E-mail: [withdrawal.permitting@deq.virginia.gov](mailto:withdrawal.permitting@deq.virginia.gov)

**RE: Chickahominy Power, Groundwater Withdrawal Special Exception #GW0078700**  
**Plant Location: 6721 Chambers Road, Charles City, VA 20203**

Dear Mr. Grist, Mr. Paylor and Members of the Water Control Board:

On behalf of the Blue Ridge Environmental Defense League and our chapter members in Virginia, I write to request that you deny the special exception to the Groundwater Management Act requested by Chickahominy Power, LLC. The exception, if granted, would be contrary to the letter and purpose of the state's Ground Water Management Act of 1992. Further, the Chickahominy Power plant itself serves no practical purpose because, like other natural gas fired electric plants, it uses as much energy as it produces.

## Special Exception is Contrary to the Purpose of the Groundwater Management Act

The proposed exception would be for water supply to a 1,600 megawatt natural gas fired combined cycle electric generating facility. Pursuant to VAC §62.1-267, DEQ plans to issue a Special Exception for a period of seven years for plant water withdrawal necessary for plant operation: start-up, evaporative cooling, boiler makeup and other non-potable needs. The regulation states: "The Board may issue a special exception to allow the withdrawal of ground water in the case of an unusual situation in which requiring the user to obtain a ground water withdrawal permit would be contrary to the intended purpose of the Act." The intent of the law at VAC §62.1-254 holds: "It is the purpose of this Act to recognize and declare that the right to reasonable control of all ground water resources within this Commonwealth belongs to the public and that in order to conserve, protect and beneficially utilize the ground water of this Commonwealth and to ensure the public welfare, safety and health, provision for management and control of ground water resources is essential." (Emphases added)

Pray, what is the "unusual situation" as required for a special exception for water resources belonging to the public, not a private entity? The Potomac Aquifer is in overall decline, a situation not likely to be reversed in seven years. There is no plausible justification offered in the DEQ's analysis.<sup>1</sup> In fact, if this and other natural gas-powered facilities are constructed, thereby contributing to greater greenhouse gas emissions, renewal of the aquifer becomes less likely.

<sup>1</sup> DRAFT Special Exception Issuance Fact Sheet—GW0078700, November 22, 2019

### Natural Gas Power Plants Life Cycle Yields No Net Energy Gain

A complete analysis of natural gas power generation indicates that the energy consumed by gas extraction, transport, plant construction and operation outweigh the energy produced. Power plant operating inefficiency and natural gas production losses are the intractable problems at the basis of this analysis. The National Renewable Energy Laboratory concluded:

“[T]he life cycle efficiency is negative, indicating that more energy is consumed by the system than is produced in the form of electricity.”<sup>2</sup>

Most recent data indicate that electric power generation from utility-scale facilities in the United States totaled about 4,171 billion kilowatt-hours in 2018. Of this total, 35.2% was generated by combustion of natural gas.<sup>3</sup> The executive summary of the National Renewable Energy Laboratory’s Life Cycle Assessment of natural gas powerplant analysis follows.

Natural gas accounts for 22% of all of the energy consumed in the United States. It is used for steam and heat production in industrial processes, residential and commercial heating, and electric power generation. Currently, 15% of utility and non-utility power is produced from natural gas, while the U.S. Department of Energy’s Energy Information Administration projects that 33% of the electricity generated in 2020 will be from natural gas-fired power plants (U.S. DOE, December 1998, p.5). Because of its importance in the power mix in the United States, a life cycle assessment (LCA) on electricity generation via a natural gas combined-cycle (NGCC) system has been performed. In the near future, this study will be compared with LCAs for other electricity generation systems previously performed by NREL: biomass gasification combined-cycle, coal-fired power production, biomass cofiring in a coal-fired power plant, and direct-fired biomass power generation (Mann and Spath, 1997; Spath and Mann, 1999; Mann and Spath, 2000; and Spath and Mann, 2000). This will give a picture of the environmental benefits and drawbacks of these various power generation technologies.

Since upstream processes can be significantly polluting, the application of LCA methodologies is important for gaining an understanding of the total environmental impact of a process. The system evaluated in this study was divided into the following process steps: construction and decommissioning of the power plant, construction of the natural gas pipeline, natural gas production and distribution, ammonia production and distribution for NOx removal, and power plant operation.

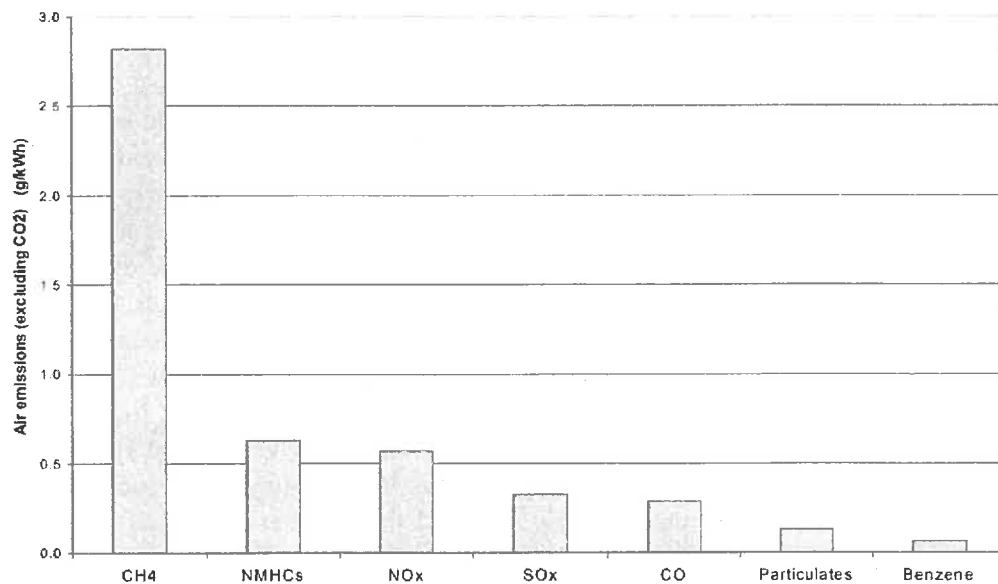
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<sup>2</sup> National Renewable Energy Laboratory, *Life Cycle Assessment of a Natural Gas Combined-Cycle Power Generation System*. Spath PL and Mann MK, NREL/TP-570-27715, Sept. 2000.

<sup>3</sup> US Energy Information Administration, “U.S. electricity generation by source, amount, and share of total in 2018,” accessed 2/12/2020 at <https://www.eia.gov/tools/faqs/faq.php?id=427&t=3>

The size of the NGCC power plant is 505 MW. The plant configuration consists of two gas turbines, a three pressure heat recovery steam generator, and a condensing reheat steam turbine. To minimize the plant's NO<sub>x</sub> emissions, the power plant incorporates selective catalytic reduction (SCR) with water injection. Additionally, the base case of this LCA assumes that 1.4% of the gross natural gas that is extracted is lost to the atmosphere as fugitive emissions (Harrison et al, 1997).

This study found that CO<sub>2</sub> accounts for 99 wt% of all air emissions. Methane is emitted in the next highest quantity, 74% of which are fugitive emissions from natural gas production and distribution. Following CO<sub>2</sub> and CH<sub>4</sub>, the next highest air emissions, in order of decreasing amount, include non-methane hydrocarbons (NMHCs), NO<sub>x</sub>, SO<sub>x</sub>, CO, particulates, and benzene.



The contributions from three greenhouse gases, CO<sub>2</sub>, CH<sub>4</sub>, and N<sub>2</sub>O, are considered in the assessment of the global warming potential (GWP) of the system. According to the Intergovernmental Panel on Climate Change (IPCC) the cumulative capacities of CH<sub>4</sub> and N<sub>2</sub>O to contribute to the warming of the atmosphere are 21 and 310 times higher than CO<sub>2</sub>, respectively, for a 100 year time frame (Houghton, et al, 1996). The GWP for this system is 499.1 g CO<sub>2</sub>-equivalent/kWh. The following table contains the emission rates for the different greenhouse gases and their contribution to the total GWP.

**Emissions of Greenhouse Gases and Contribution to GWP**

	Emission amount (g/kWh)	Percent of greenhouse gases in this table (%)	GWP relative to CO <sub>2</sub> (100 year IPCC values)	GWP value (g CO <sub>2</sub> -equivalent /kWh)	Percent contribution to GWP (%)
CO <sub>2</sub>	439.7	99.4	1	439.7	88.1
CH <sub>4</sub>	2.8	0.6	21	59.2	11.9
N <sub>2</sub> O	0.00073	0.0002	310	0.2	0.04

The GWP of the system can also be divided among the different system operations. The table below shows the contribution of each subsystem to the overall GWP of the system. The power plant CO<sub>2</sub> emissions contribute the most to the GWP at 64%. Because of the natural gas lost to the atmosphere, the natural gas production and distribution subsystem is responsible for nearly all of the remainder of the system's GWP.

**GWP Contribution For Each System Component**

Process step	GWP value (g CO <sub>2</sub> -equivalent /kWh)	Percent contribution to GWP (%)
Power plant operation	372.2	74.6
Natural gas production & distribution	124.5	24.9
Construction & decommissioning	2.0	0.4
Ammonia production & distribution	0.4	0.1
Total	499.1	100.0

Note: The construction and decommissioning subsystem includes power plant construction and decommissioning as well as construction of the natural gas pipeline.

The power plant efficiency for this NGCC system is 48.8% (higher heating value (HHV) basis). This is defined as the energy to the grid divided by the energy in the natural gas feedstock to the power plant. Four other types of efficiencies/energy ratios were defined to study the energy budget of the system.

**Energy Efficiency and Energy Ratio Definitions**

Life cycle efficiency (%) (a)	External energy efficiency (%) (b)	Net energy ratio (c)	External energy ratio (d)
$= \frac{Eg - Eu - En}{En}$	$= \frac{Eg - Eu}{En}$	$= \frac{Eg}{Eff}$	$= \frac{Eg}{Eff - En}$
where: Eg = electric energy delivered to the utility grid Eu = energy consumed by all upstream processes required to operate power plant En = energy contained in the natural gas fed to the power plant Eff = fossil fuel energy consumed within the system (e)			

- (a) Includes the energy consumed by all of the processes.
- (b) Excludes the heating value of the natural gas feedstock from the life cycle efficiency formula.
- (c) Illustrates how much energy is produced for each unit of fossil fuel energy consumed.
- (d) Excludes the energy of the natural gas to the power plant.
- (e) Includes the natural gas fed to the power plant since this resource is consumed within the boundaries of the system.

The net energy ratio is a more accurate measure of the net energy yield from the system than the external energy ratio because it accounts for all of the fossil energy inputs. The following table contains the resulting efficiencies and energy ratios for the NGCC system. All efficiencies are given on a LHV basis.

**Efficiencies and Energy Ratio Results (LHV basis)**

System	Life cycle efficiency (%)	External energy efficiency (%)	Net energy ratio	External energy ratio
Natural gas combined-cycle	-70.1%	29.9%	0.4	2.2

Because natural gas is not a renewable resource, the life cycle efficiency is negative, indicating that more energy is consumed by the system than is produced in the form of electricity (i.e., if the feedstock were renewable then the life cycle efficiency and external energy efficiency would be the same). Additionally, the net energy ratio in the table above shows that for every MJ of fossil energy consumed 0.4 MJ of electricity are produced. Excluding the consumption of the natural gas feedstock, the external energy efficiency and the external energy ratio indicate that upstream processes are large consumers of energy. Disregarding the energy in the natural gas feedstock, 98% of the total energy is consumed in the production and distribution of natural gas. This subsystem can be further broken up into natural gas extraction, separation and dehydration, sweetening, and pipeline transport. Of these operations, the natural gas extraction and transport steps consume the most energy. Drilling requires electricity, which is supplied by diesel combustion engines; the pipeline compressors move the natural gas using a combination of grid electricity and natural gas.

In terms of resource consumption, natural gas is used at the highest rate, accounting for nearly 98 wt% of the total resources. This is followed by coal at 1.0 wt%, iron ore plus scrap at 0.7 wt%, oil at 0.4 wt%, and limestone at 0.4 wt%. Practically all of the iron and limestone are used in the construction of the power plant and pipeline, while the production and distribution of the natural gas consumes the vast majority of the coal and oil. Also, the resource requirements associated with pipeline construction are greater than those due to power plant construction. The total amount of water pollutants was found to be extremely small (0.01 g/kWh) compared to the other emissions. The main water emissions are oils and dissolved matter, making up 80 wt% of the total water emissions. The oils come primarily from natural gas production and distribution, while the



dissolved matter is produced from the material manufacturing steps involved in pipeline and power plant construction.

In terms of solid waste, 94 wt% percent of the system's total comes from the natural gas production and distribution block. A large percentage of the waste, 65% of the total, comes from pipeline transport. Although the majority of the pipeline compressors are driven by reciprocating engines and turbines which are fueled by the natural gas, there are some electrical machines and electrical requirements at the compressor stations. Since most of the electricity in the U.S. is generated from coal-fired power plants, the majority of the waste will be in the form of coal ash and flue gas clean-up waste. The second largest waste source is natural gas extraction (29% of the total waste). The only waste stream from the power plant itself will be a small amount of spent catalyst which is generated every one to five years from the SCR unit.

A sensitivity analysis on this system determined that changes in two parameters, power plant efficiency and natural gas losses, have the largest effect on the results. Although NGCC is currently the most efficient technology available for large-scale electricity production, any increases in efficiency will reduce resulting environmental stressors throughout the system. Reducing natural gas losses during production and distribution increases the net energy balance and lowers the GWP.

### Conclusion

Based on our analysis and the findings published by the National Renewable Energy Laboratory, we submit that the Chickahominy Power application is not in accord with Groundwater Management Act of Virginia. Further, the Chickahominy Power plant would be of benefit to the groundwater, to air quality, to the energy supply, to greenhouse gas reductions and to the people of Virginia only by shutting down before it opens.

Respectfully submitted,



Louis A. Zeller, Executive Director

CC: Senator Lionell Spruill Sr., (757) 424-2178 or [district05@senate.virginia.gov](mailto:district05@senate.virginia.gov)  
Senator Thomas Norment Jr., (757) 259-7810 or [district03@senate.virginia.gov](mailto:district03@senate.virginia.gov)  
Senator Stephen Newman (804) 698-7523 or [district23@senate.virginia.gov](mailto:district23@senate.virginia.gov)  
Senator Louise Lucas (804) 698-7518 or [district18@senate.virginia.gov](mailto:district18@senate.virginia.gov)  
Senator David Marsden (804) 698-7537 or [district37@senate.virginia.gov](mailto:district37@senate.virginia.gov)



OWS Water Withdrawal, re <withdrawal.permitting@deq.virginia.gov>

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## Permit #GW0078700 Chickahominy Plant

1 message

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Sharon Ponton <ponton913@msn.com>

Fri, Feb 14, 2020 at 3:38 PM

To: "withdrawal.permitting@deq.virginia.gov" <withdrawal.permitting@deq.virginia.gov>

Blue Ridge Environmental Defense League

8260 Thomas Nelson Hwy., Lovington, VA

ponton913@msn.com

(434) 420-1874

February 14, 2020

Mr. Joseph Grist

Mr. David Paylor

Members of the State Water Control Board

Virginia Department of Environmental Quality

Central Office

1111 E. Main Street

Richmond, VA 23219

Email: withdrawal.permitting@deq.virginia.gov

Re: Chickahominy Power, Groundwater Withdrawal Special Exception #GW0078700

Plant Location: 6721 Chambers Road, Charles City, VA 20203

Dear Mr. Grist, Mr. Paylor & Members of the State Water Control Board:

20 On behalf of the Blue Ridge Environmental Defense League and our chapters and members in Virginia, I write to request you deny the special exception requested by the Chickahominy Power, LLC. The exception, if granted, would be contrary to the letter and purpose of the state's Ground Water Management Act of 1992 and specifically the efforts by the Virginia Department of Environmental Quality to protect the aquifers in the Eastern Virginia Ground Water Management Area.

In 2016 in cooperation and coordination, with research and studies completed by the United States Geologic Service, the Virginia Department of Environmental Quality issued an Integrated Resource Report to then Governor of Virginia Terrence McAuliffe and the Virginia General Assembly. Chapter 6 of the report, entitled, "Groundwater Protection Programs/Assessment" outlines steps taken to update the area covered by the Eastern Virginia Ground Water Management Area (EVGWMA) to include all of the Coastal Plain east of I-95 "in order to ensure comprehensive management of the aquifer system." In addition to expanding the EVGWMA, in January, 2014, Virginia had codified a criteria that requiredissuance of groundwater withdrawal permits to withdrawers of groundwater in excess of 300,000 gallons per month in Virginia's Ground Water Management Areas. Over 100 existing users applied for permits as a result of the expansion of the EVGWMA. At the time the report was issued in 2016, 53 existing user permits had been issued to 82 facilities.

On December 15, 2017, an article appeared in the Richmond Times Dispatch entitled, "State reaches deals with large water users to preserve aquifers." The article quoted the Integrated Resource Report of 2014, citing the Potomac, Aquia, Yorktown-Eastover and Piney Point aquifers as being "confined aquifers, with relatively low recharge from rainfall" and noted that some had "declined by as much as 200 feet in the decades since World War II." The decline in water levels also created additional issues because as land sinks, it creates a permanent loss in groundwater storage capacity in those aquifers, as well as increased opportunity for intrusion of salt water into these fresh water aquifers. The article stated, "From 1979 to 1995, the land in southeastern Virginia dropped 24.2 millimeters at Franklin...and 50.2 millimeters at Suffolk from 1982 to 1995." Bill Hayden, VADEQ spokesman, is quoted in the article saying"this is a long-term issue and will take years to resolve." Finally, Governor McAuliffe said the permits had allowed withdrawal of 146 million gallons per day when he took office, but the new permits would cut the allowable consumption by as much as 52 percent.

We sincerely appreciate the efforts of the VADEQ to protect the aquifers in the EVGWMA from over-use and the loss of their fresh water storage capacity caused by sinking land. We must, therefore, question the reasoning now being used to issue a permit special exception which would allow Chickahominy Power to withdraw up to 30,000,000 gallons of water from these fragile aquifers wiping out much of the progress made in past years.

We clearly understand the VADEQ under Director Paylor wishes to maintain Virginia's "business friendly" status, but we must ask at what cost? We believe there is no reasonable position which can be manufactured to justify this permit. We ask the State Water Control Board deny the application for this special exception.

Sincerely,

Sharon V. Ponton  
Community Organizer  
Stop the Pipelines Campaign Coordinator

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2/17/2020

Commonwealth of Virginia Mail - Permit #GW0078700 Chickahominy Plant

22:



OWS Water Withdrawal, rr &lt;withdrawal.permitting@deq.virginia.gov&gt;

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**Comments on Draft Special Exception No. GW0078700**

1 message

**Taylor Lilley** <TLilley@cbf.org>

Fri, Feb 14, 2020 at 7:57 PM

To: "withdrawal.permitting@deq.virginia.gov" &lt;withdrawal.permitting@deq.virginia.gov&gt;

Cc: "Grist, Joseph" &lt;joseph.grist@deq.virginia.gov&gt;

Dear Mr. Grist,

I hope this email finds you well. Attached are comments from the Chesapeake Bay Foundation (CBF) regarding the issuance of Draft Special Exception No. GW0078700. CBF appreciates the opportunity to provide comments on this matter.

Best,

Taylor Lilley

Taylor Lilley, Esq.

(She/her/hers)

***Environmental Justice Staff Attorney***

Chesapeake Bay Foundation

6 Herndon Ave,

Annapolis, MD 21403

443-482-2093

TLilley@cbf.org

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2/17/2020

Commonwealth of Virginia Mail - Comments on Draft Special Exception No. GW0078700



**CHESAPEAKE BAY  
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**CBF Comments on Draft Special Exception - Chickahominy Power Station.docx**

1143K

24



CHESAPEAKE BAY FOUNDATION  
*Saving a National Treasure*

February 14, 2020

*Via email to:*

Joseph Grist, Program Manager  
Virginia Department of Environmental Quality  
Central Office  
1111 E. main Street  
Suite 1400  
Richmond, VA 23219

Heather Wood, Chair  
State Water Control Board  
c/o Office of Regulatory Affairs  
Department of Environmental Quality  
P.O. Box 1105  
Richmond, VA 23218

*CC:*

Peggy Sanner  
Virginia Executive Director  
Chesapeake Bay Foundation  
1108 East Main St.  
Richmond, VA 23219

**RE: Draft Special Exception to Withdraw Groundwater in the Eastern  
Virginia Groundwater Management Area – Chickahominy Power LLC  
(GW0078700)**

Dear Mr. Grist, Chairwoman Wood and Members of the Board:

The Chesapeake Bay Foundation (“CBF”) respectfully submits the following comments on the draft groundwater withdrawal special exception permit (“permit”) for the Chickahominy Power Station (No. GW0078700). The Groundwater Management Act of 1992 (“Act”) allows the State Water Control Board (“Board”) to issue special exception permits for “unusual” situations where “requiring the applicant to obtain a groundwater withdrawal permit would be contrary to the intended purposes of the [Act].”<sup>1</sup> The Board’s enabling regulations, contained within the Virginia Administrative Code (“Administrative Code”), state that the Board may require compliance with the criteria described in 9VAC25-610-110 (Evaluation Criteria for Permit Applications).<sup>2</sup> In light of DEQ’s flawed decision to issue a draft special

<sup>1</sup> 9 VA. ADMIN CODE §24-610-190 (2014).

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exception and the evaluation criteria provided by the Administrative Code, CBF requests that the Board deny Chickahominy LLC's ("applicant") application.

## **Introduction**

The proposed Chickahominy Power Station is a 1,600-megawatt natural gas-fired combined cycle electric generating facility.<sup>3</sup> The facility will be located approximately 1.1 miles away from the recently approved 1,050-megawatt C4GT Power Station, in the predominantly African American Charles City County.<sup>4</sup> Should construction of this facility proceed, it would be among the largest fossil-fuel generating facilities in the Commonwealth.<sup>5</sup> For reference, Chesterfield Power Station, which is currently the largest in Virginia, has a 1,640-megawatt capacity.<sup>6</sup> In order to maintain a facility of this magnitude, the applicant intends to withdraw up to 30 million gallons per year, or 3.5 million gallons per month, from the Potomac Aquifer.<sup>7</sup> The applicant contends that after seven years the facility will cease to rely on the Potomac Aquifer and instead utilize a surface water connection from New Kent County, though the connection does not yet exist.

On September 17, 2019, DEQ issued a draft special exception to Chickahominy Power LLC. In its review of the application, the Board may look to the evaluation criteria for permit applications provided by 9VAC25-610-110<sup>8</sup> These criteria, in conjunction with the technical evaluation provided by DEQ, provide a substantive rubric for the Board's evaluation.

### **I. DEQ failed to state a sufficient basis for the issuance of the Draft Special Exception.**

DEQ fails to explain what makes the proposed Chickahominy Power Station "unusual" enough to trigger a special exception, other than the fact that it would fail to be approved for a groundwater withdrawal permit. Such a decision is a rather liberal interpretation of the Act and suggests that all applicants who are improper candidates for a groundwater withdrawal permit should be offered a special exception. By that logic, anyone who wished to withdraw from a groundwater management area could be granted a special exception, regardless of the consequences to the aquifer. As the agency responsible for administering the Groundwater

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<sup>2</sup> 9 VA. ADMIN CODE §25-610-110 (2014).

<sup>3</sup> Commonwealth of Virginia Department of Environmental Quality, Special Exception Issuance of Fact Sheet (Sept. 17, 2019), <https://www.deq.virginia.gov/Portals/0/DEQ/Water/OWS-WWPandC/Draft%20Fact%20Sheet-Chickahominy%20Power-11-22-19.pdf?ver=2019-12-03-091443-603>

<sup>4</sup> See UNITED STATES CENSUS BUREAU, QUICK FACTS – CHARLES CITY COUNTY, VA, <https://www.census.gov/quickfacts/charlescitycountyvirginia>

<sup>5</sup> See Sarah Vogel song, *Comment closes Wednesday on permit for giant new natural gas power plant in Charles City*, VIRGINIA MERCURY (Mar. 19, 2019), <https://www.virginiamercury.com/2019/03/19/comment-closes-wednesday-on-permit-for-new-natural-gas-power-plant-in-charles-city/>

<sup>6</sup> *Id.*

<sup>7</sup> Commonwealth of Virginia Department of Environmental Quality, *Draft Special Exception September 17, 2019* (No. GW0078700) (Sept. 17, 2019), <https://www.deq.virginia.gov/Portals/0/DEQ/Water/OWS-WWPandC/Draft%20Fact%20Sheet-Chickahominy%20Power-11-22-19.pdf?ver=2019-12-03-091443-603>

<sup>8</sup> 9 VA. ADMIN CODE §24-610-190 (2014).



Management Act, this violates the Act and DEQ's statutory duty, and the Board should reject DEQ's insufficient analysis and deny the application.

- a. *The Technical Evaluation Provided by DEQ in the Draft Special Exception is an insufficient basis for determining the potential effects of this withdrawal on the Potomac Aquifer.*

The Technical Evaluation included in the draft special exception relies almost entirely on Aquifer tests performed in 2002, to determine the potential drawdown on the Potomac Aquifer. While the Technical Evaluation notes that USGS data from 2009 shows a steady decline in the Aquifer, it also states 2009 data shows water levels in the aquifer beginning to "recover slightly."<sup>9</sup> From this, DEQ seems to be implying that the Potomac Aquifer has improved in recent years, though there is no further evidence cited to support this. To ask the Board to permit a 30-million-gallon annual withdrawal, for a period of seven years, from one of the only sources of potable water in the area, on the basis of 18-year-old data, is an extraordinary leap of faith. What's more, the Technical Evaluation does not appear to account for the Ghyben-Herzberg Principle, which is a typical component of the analysis of coastal aquifers. According to the Ghyben-Herzberg Principle, a change in the height of the water table can cause the saltwater interface to move closer to the surface by a multiple of 40 feet.<sup>10</sup> It would be impossible for the Board to make a decision to allow a withdrawal of this magnitude without more recent data that accounts for the unique characteristics of the Aquifer in question.

The Virginia Administrative Code directs the Board to prioritize groundwater use for human consumption above all other uses.<sup>11</sup> As noted by the Charles City County Water Supply Plan, the Potomac Aquifer is the main source of potable water for the county.<sup>12</sup> Such a fact must be forefront in the Board's review as it considers the deficiency of the information provided by the applicant and evaluated by DEQ.

## **II. The Board's evaluation of the Draft Special Exception should be guided by the evaluation criteria provided in 9VAC25-610-110.**

The Administrative Code provides no specific criteria for the evaluation of a special exception permit.<sup>13</sup> Instead, it directs the Board to look to the required criteria for the evaluation of a groundwater withdrawal permit. Specifically, 9VAC25-610-110 lists the following factors for consideration:

- a. The nature of the use of the proposed withdrawal;

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<sup>9</sup> See Commonwealth of Virginia Department of Environmental Quality, *Draft Special Exception September 17, 2019* (No. GW0078700) at 8, (Sept. 17, 2019), <https://www.deq.virginia.gov/Portals/0/DEQ/Water/OWS-WWPandC/Draft%20Fact%20Sheet-Chickahominy%20Power-11-22-19.pdf?ver=2019-12-03-091443-603>.

<sup>10</sup> *Relation of Salt Water to Fresh Water in Aquifers*, NATIONAL GROUND WATER ASSOCIATION, <https://www.ngwa.org/what-is-groundwater/About-groundwater/relation-of-salt-water-to-fresh-water-in-aquifers>.

<sup>11</sup> 9 VA. ADMIN CODE §25-610-110 (2014).

<sup>12</sup> 2013 WATER SUPPLY MANAGEMENT PLAN, COUNTY OF CHARLES CITY, 4 (2010).

<sup>13</sup> 9 VA. ADMIN CODE §24-610-190 (2014).

- b. The public benefit provided by the proposed withdrawal;
- c. The proposed use of innovative approaches such as aquifer storage and recovery systems, surface water and groundwater conjunctive use systems, multiple well systems that blend withdrawals from aquifers that contain different quality groundwater in order to produce potable water, and desalinization of brackish groundwater;
- d. Prior public investment in existing facilities for withdrawal, transmission, and treatment of groundwater;
- e. Climatic cycles;
- f. Economic cycles;
- g. The unique requirements of nuclear power stations;
- h. Population and water demand projections during the term of the proposed permit;
- i. The status of land use and other necessary approvals; and
- j. Other factors that the board deems appropriate.<sup>14</sup>

While not all of these factors may be relevant to the Board's analysis, several are particularly critical for the Chickahominy Power Station proposal. Notably, 1) the public benefit of the proposed withdrawal; 2) prior public investment in existing facilities for withdrawal, transmission, and treatment of groundwater; 3) Climatic cycles; 4) Population and water demand projections during the term of the proposed permit; and 5) Other factors that the board deems appropriate.

*a. Public Benefit and prior public investment*

There is no public benefit to be gained from the construction and operation of the Chickahominy Power Station. The State Air Board has only recently approved the 1,050-megawatt C4GT Power Station, located less than 1.1 miles away from the proposed site of the Chickahominy Power Station.<sup>15</sup> If built, both of these facilities would lie approximately 15 miles away from the Chesterfield Power Station, the largest fossil-fuel generating facility in the Commonwealth. Charles City County—the community that will be most directly impacted by the proposed project—has no shown need for an additional electric generating plant, especially one of this size. Indeed, the applicant states its intention to sell the power generated by the Chickahominy Power Station directly to the regional Pennsylvania-New Jersey-Maryland (PJM) Interconnection wholesale market.<sup>16</sup> A recent analysis shows that Dominion Energy has “consistently over-forecast demand to justify” overbuilding natural gas electric generation

<sup>14</sup> 9 VA. ADMIN CODE §25-610-110 (2014).

<sup>15</sup> See Sarah Vogel song, *Comment closes Wednesday on permit for giant new natural gas power plant in Charles City*, VIRGINIA MERCURY (Mar. 19, 2019), <https://www.virginiamercury.com/2019/03/19/comment-closes-wednesday-on-permit-for-new-natural-gas-power-plant-in-charles-city/>.

<sup>16</sup> *Chickahominy Power Station*, NS Energy, <https://www.nsenergybusiness.com/projects/chickahominy-power-station/>.

capacity in the Commonwealth.<sup>17</sup> The Board should consider this factor when applying the “public benefit provided” criteria in its review of the application. 9VAC25-610-110(b).

*b. Climatic Cycles and Water Demand Projections.*

When the issue of climate change was raised at the most recent public meeting, representatives from DEQ and the Board responded that such a consideration was beyond their purview. Yet Virginia regulations explicitly include “climatic cycles” as a factor for the Board’s consideration. 9VAC25-610-110(e). Governor Northam firmly established climate change as a pressing issue for the Commonwealth, and its economy, through his appointment of Ann C. Phillips to his cabinet to serve as his Special Assistant for Coastal Adaptation and Protection. Ms. Phillips’ sole focus is finding a way to respond to the climate change effects the Commonwealth has already begun to experience.<sup>18</sup> Ms. Phillips urged the House Budget Committee as recently as last summer to develop a plan to address sea level rise. As Representative Bobby Scott noted in response, “[o]ne reality with climate change, the cost of doing nothing greatly exceeds the cost of doing something.”<sup>19</sup> The Board should heed the urging of its fellow public servants and take this opportunity to do something. Without recent tests, data, or projections that take not only the unique character of the aquifer into account but also the near certainty of continued sea level rise and unreliable weather patterns, an informed and rational - decision on the reasonableness of the draft special exception cannot be reached.

The term of the draft special exception permit is seven years. During that time the Potomac Aquifer will provide the water necessary not only for the construction of the facility, but for its operation. At the conclusion of the permit term, the applicant intends to transition to a surface water connection from New Kent County, which has yet to be built. The applicant itself knows that reliance on this alternative is a gamble, as it initially asked for the draft special exception to include terminology that would allow it to continue its withdrawal should construction of the pipeline be delayed through no fault of its own.<sup>20</sup> If the applicant is uncomfortable relying on the construction of the New Kent County connection, the Board should be too. When the draft special exception permit expires in seven years, the Commonwealth will be home to a billion-dollar facility that will continue to require massive water withdrawals, regardless of whether the New Kent County connection exists. Such facts will enable the applicant to apply for a standard groundwater withdrawal permit, based on its existing investment and need. The Board should not allow the applicant to bootstrap its need for a standard groundwater withdrawal permit via the Special Exception permit process. As DEQ noted, the continued withdrawal at the rate proposed by the applicant would almost certainly jeopardize groundwater supplies for human consumption.<sup>21</sup>

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<sup>17</sup> See Darren Sweeney, *Overpowered: In Virginia, Dominion faces challenges to its reign*, S&P GLOBAL MARKET INTELLIGENCE (Dec. 4, 2019), <https://www.spglobal.com/marketintelligence/en/news-insights/latest-news-headlines/54171542>.

<sup>18</sup> Michelle Hankerson, *Northam appoints first cabinet member to focus on coastal protection*, VIRGINIA MERCURY (Sept. 22, 2018) <https://www.virginiamercury.com/blog-va/northam-appoints-first-cabinet-member-to-focus-on-coastal-protection/>.

<sup>19</sup> *Id.*

<sup>20</sup> Email from Ryan Green, Office of Water Supply at Virginia Department of Environmental Quality (Sept. 30, 2018, 3:07:13 PM).

<sup>21</sup> Memorandum from Department of Environmental Quality, *Justification for proposing a Special Exception for the Chickahominy Power Charles City County Project* (2019).

c. *Other Factors – Environmental Justice*

On January 7<sup>th</sup> of this year, the Fourth Circuit Court of Appeals issued its decision in *Friends of Buckingham v. State Air Pollution Control Board*. The decision, among other things, established the incontrovertible role of environmental justice in determinations of site suitability. Virginia’s Energy Plan, defined environmental justice as “the fair treatment and meaningful involvement of all people regardless of race, color, faith, national origin, or income, with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies.”<sup>22</sup> Environmental justice is not an explicit requirement of the Board’s analysis, but the allowance for review of “other factors” creates room for its consideration.

Although the State Air Board has failed to define the residents of Charles City County as an “environmental justice community, it has done so through reliance on an admittedly insufficient tool. EJSCREEN.<sup>23</sup> On its website, the U.S. Environmental Protection Agency (EPA) details the shortcomings of this tool. The EPA states that EJSCREEN was developed to “highlight places that may be candidates for further review, analysis or outreach to support the agency’s environmental justice work.”<sup>24</sup> The EPA goes on to note that “EJSCREEN relies on demographic and environment estimates that involve substantial uncertainty.” The demographic estimates, such as percent low-income, “come from surveys, not a full census of all households.” This sort of inaccuracy should not be allowed to exist as the sole basis for jeopardizing the health and safety of the residents of Charles City County. This inapplicability of EJSCREEN to a site determination was proven in practice when the *Friends of Buckingham* court found the State Air Board’s determination that Union Hill was not an environmental justice community to be “arbitrary, capricious, and unsupported by substantial evidence.”<sup>25</sup>

The *Friends of Buckingham* court held that “...environmental justice is not merely a box to be checked, and the Board’s failure to consider the disproportionate impact on those closest to the Compressor Station resulted in a flawed analysis.”<sup>26</sup> As the last phase in the regulatory review process before the construction of the Chickahominy Power Station Proceeds, the Board should take this opportunity not to repeat the mistakes of the Air Board and engage in a thorough and complete analysis of the community that will bear the burden of this proposed facility.

### III. Conclusion

As has been shown, DEQ has failed in its duty to undergo a technical evaluation that provides the Board with reliable information and conclusions on which to base its decision. What is more, the applicant and its proposed facility prove to be unsuitable candidates for a special

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<sup>22</sup> THE COMMONWEALTH OF VIRGINIA’S 2018 ENERGY PLAN, OFFICE OF THE SECRETARY OF COMMERCE AND TRADE, DEPARTMENT OF MINES, MINERALS AND ENERGY (2018) <https://www.governor.virginia.gov/media/governorvirginiagov/secretary-of-commerce-and-trade/2018-Virginia-Energy-Plan.pdf>.

<sup>23</sup> Va. DEQ, Factors Considered Under Va. Code § 1307.E and Environmental Justice Presentation at 23 (June 21, 2019), <https://www.deq.virginia.gov/Programs/Air/ChickahominyPowerStation.aspx>.

<sup>24</sup> See *Limitation and Caveats in Using EJSCREEN*, U.S. ENV. PROT. AGENCY, <https://www.epa.gov/ejscreen/limitations-and-caveats-using-ejscreen>.

<sup>25</sup> See *Friends of Buckingham v. State Air Pollution Control Board*, 947 F.3d 68 (2020).

<sup>26</sup> *Id.*

exception when viewed through the lens of the evaluation criteria provide by the Administrative Code. In light of the facts presented here, CBF respectfully requests that the Board utilize its authority to deny the draft special exception for groundwater withdrawal in the Eastern Virginia Groundwater Management Area (No. GW0078700), provisionally granted to Chickahominy, LLC.

Respectfully,

A handwritten signature in black ink, appearing to read 'Taylor Lilley', written over a horizontal line.

Taylor Lilley, Esq.  
Environmental Justice Staff Attorney  
Chesapeake Bay Foundation  
6 Herndon Ave.  
Annapolis, MD 21401



## VIRGINIA RIVER HEALERS

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February 14, 2020

Virginia Department of Environmental Quality  
Office of Water Supply  
C/O Joseph Grist  
PO Box 1105  
Richmond, VA 23219  
[withdrawal.permitting@deq.virginia.gov](mailto:withdrawal.permitting@deq.virginia.gov)

David Paylor, Director  
Department of Environmental Quality  
1111 East Main Street, Suite 1400  
Richmond, VA 23219

Re: Chickahominy Power LLC special exception to the Groundwater Management Act

Dear Program Manager Joseph Grist, Members of the Board, and Director Paylor:

I am writing in regards to the Chickahominy Power LLC application, 13800 Coppermine Rd Ste 115, Herndon VA 20171; GW0078700. Chickahominy Power LLC should be denied a special exception to the Groundwater Management Act.

The applicant and DEQ have not demonstrated that the justification to ask for a special exception is an unusual situation in which requiring the user to get a permit would be contrary to the intended purpose of the groundwater management act. I am concerned with several factors of this project, including:

- The proposed beneficial use is not for human consumption
- The requested groundwater withdrawal is in an area that has incurred an overall decline in the Potomac Aquifer
- The exception would be contrary to Virginia water policy in code, which requires DEQ to balance all beneficial uses, to optimize all of the public resources. The Potomac Aquifer is not a private resource, it's a public resource that the DEQ has to oversee.
- Viable alternative water sources will be available

- Authorizing a withdrawal permit under these facts will be contrary to the intended purpose of the Act.

- Authorizing a withdrawal permit would place unjust public risk on an already threatened aquifer. The Potomac Aquifer is already in a threatened state. In 2017, Deq received a report compiled by the Eastern Virginia Groundwater Management Advisory Committee that stated the Potomac Aquifer is facing significant sustainability challenges. Although DEQ has taken steps to negotiate reduced permit levels for the largest users of groundwater in the region, this step has failed to create a long term strategy. This exception for withdrawal would fail to look beyond the immediate time horizon for broader ideas of how to protect and sustain the aquifer for future human needs.

[https://www.deq.virginia.gov/Portals/0/DEQ/Water/WaterSupplyPlanning/EVGWAC/FinalReport/GWAC\\_FinalReport\\_10.27.17.pdf](https://www.deq.virginia.gov/Portals/0/DEQ/Water/WaterSupplyPlanning/EVGWAC/FinalReport/GWAC_FinalReport_10.27.17.pdf)

- The 2017 report compiled by the Eastern Virginia Groundwater Management Advisory Committee provided evidence to DEQ, in conjunction with the U.S. Geological Survey (USGS), that concluded that available groundwater supplies in the EVGMA are insufficient to meet the demands of current and future groundwater users.

- **This exception would place a excessive risk to our water security by (1) declining groundwater levels and loss of artesian characteristics (2) increased potential for saltwater intrusion from gradient reversal and upconing (3) accelerated rates of land subsidence, and (4) irreversible loss of long-term aquifer storage.**

The applicant and DEQ have failed to demonstrate that no other sources of water supply are practicable. 9VAC 25-610-110 (D)(3)(a) of the Virginia code states that the applicant should submit an alternatives analysis demonstrating that all alternative sources other than groundwater were considered for use in the proposed activity. In addition the applicant should demonstrate that it has exhausted all practicable alternatives for the proposed activity. The department indicates that the applicant is in the midst of ongoing negotiations with New Kent county to provide water for the proposed Chickahominy gas power plant. This acknowledgement shows that there are other options available. The department believes connecting to New Kent County represents a viable long-term alternative for the power plant.

The applicant and DEQ have failed to evaluate potential impacts associated with climate change or groundwater resources. The study published by the Virginia Coastal Policy Center, Water Supply Planning in Virginia: "The Future of Groundwater and Surface Water in 2018," indicates that "the Commonwealth should proceed with caution to avoid overusing this resource as the state of our climate and warming trends remains in flux."

For these reasons, I respectfully request that the Water Board deny the special exception water withdrawal for the Chickahominy gas power plant.

Both DEQ and the applicant have failed to consider environmental justice issues of the area directly impacted by the request for exception to the Groundwater Management Act. You need to consider the environmental justice issues that already pertain to the community around the proposed Chickahominy Power Plant. **This water permit and exception to the Groundwater Management Act would further place unjust risk to the water security and the water resources of minority communities and would be in violation of §67-101(12) of Virginia code that states Energy Policy of the Commonwealth objectives must seek to develop "energy resources and facilities in a manner that does not**

impose a disproportionate adverse impact on economically disadvantaged or minority communities." <https://law.lis.virginia.gov/vacode/title67/chapter1/section67-101/>

An Independent Spatial Analysis that was submitted to the board in 2019 by Stephen Metts should be fully considered as reason to deny this exception to the Groundwater Management Act. [https://spatial-analysis-findings.s3.us-east-2.amazonaws.com/Independent+spatial+data+analyses+of+the+2019+Chickahominy+Power+Plant\\_6-4-19.pdf](https://spatial-analysis-findings.s3.us-east-2.amazonaws.com/Independent+spatial+data+analyses+of+the+2019+Chickahominy+Power+Plant_6-4-19.pdf)

#### **Summary Statement for Chickahominy Power Plant Independent Spatial Analysis - June 4, 2019**

In a spatial analysis report for the Chickahominy Power Plant project currently under consideration with the Virginia Department of Environmental Quality, a series of concerning project aspects were quantified and mapped using publically available data. While the report itself goes into detail regarding each, a short summary is provided below:

1. The proposed gas-fired project would be the 5th such siting in the US where a combined output of > 2,500 MW is sited within 1.1 miles of another plant. This is an atypical configuration within the larger field of 1,700 + gas-fired plants. The current application does little to address the combined output and potential impacts of such a configuration on localized populations.
2. The current application contains little Environmental Justice (EJ) analysis, certainly none that could be considered *robust*. The only EJ document found in the current application is an appendix printout of EJSCREEN for various project proximities. The spatial analysis in the report, however, details with both maps and tabular results the existence of EJ eligible local populations in close proximity to the project.
3. In addition to EJ eligible populations based on US Census data, the report further considers the spatial intersection with indigenous tribal lands, further contextualizing and bolstering EJ eligibility for this project.
4. In addition to the various demographic analyses of the report, consideration is given to the emission modeling methods and results found in the application. Mirroring consistent concerns and issues over modeling protocol found in the public record for this project, the report highlights the absence of any meaningful discussion, mapping or quantification of combined and localized emissions from both the C4GT facility and the Chickahominy plant. In light of this application deficiency, there is no method by which to gauge potential adverse and disproportionate air quality impacts on EJ eligible populations in close proximity to the combined projects. As such, the current application is deficient in both informing and protecting the public.

Citizen Drone documentation (attached below) shows that residential buildings create a 'hotspot' in the proximity of the proposed gas power station and around the point where water would be withdrawn. The population of this area is a minority-majority population. Accordingly, the Board should find an exception suitable for the site proposal. Siting the power plant and this water permit in this particular community is unreasonable under Va. Code § 10.1-1307, and approving the draft permit would represent a failure to act



in accordance with the Commonwealth Energy Policy in Va. Code § 67-102 (A)(11). I believe after reviewing this documentation you will find ample reason to deny the applicant the water permit because of environmental justice issues relating to the minority population, poverty levels, and population density of the proposed site. Therefore, I ask that the you deny Chickahominy Power LLC special exception to the Groundwater Management Act.

Thank you,

Thomas Burkett

[vahealers@gmail.com](mailto:vahealers@gmail.com)

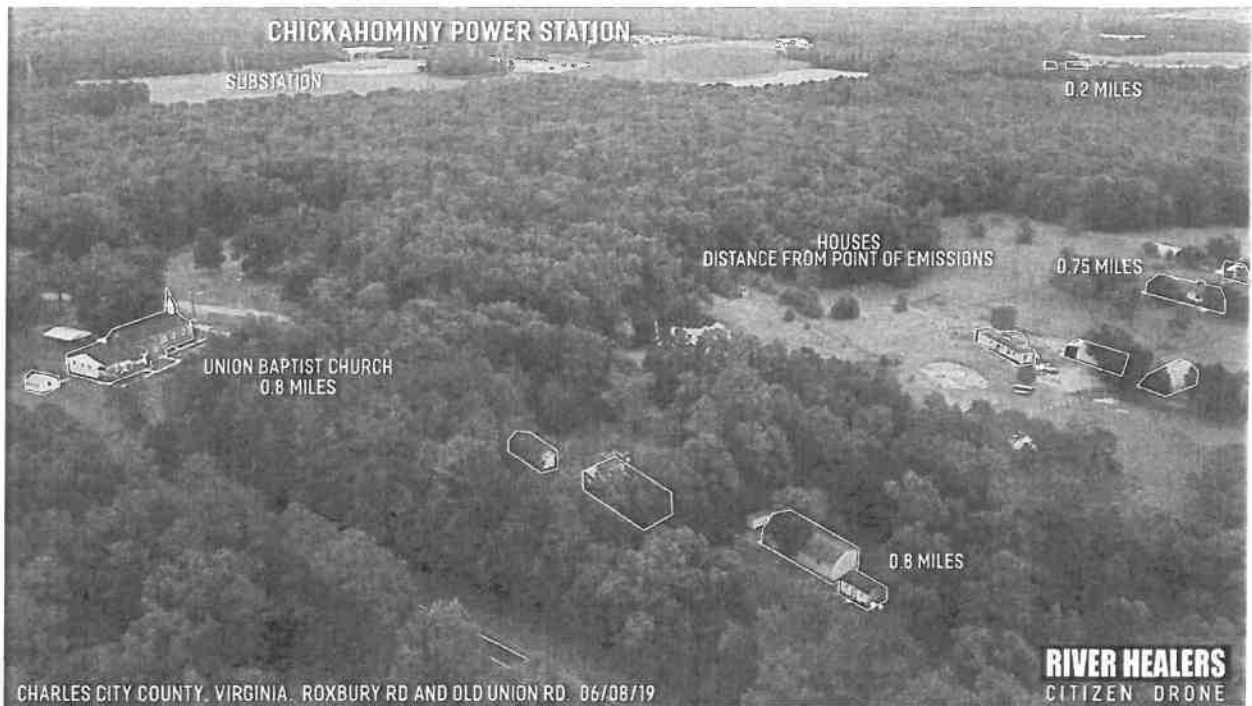
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2900 Barton Ave NE

Richmond, VA 23222

[virginiariverhealers.com](http://virginiariverhealers.com)







**CODE OF VIRGINIA  
§ 67-101  
VIRGINIA ENERGY PLAN,  
ENERGY POLICY OF THE  
COMMONWEALTH SEEKS TO  
DEVELOP "ENERGY RESOURCES  
AND FACILITIES IN A MANNER  
THAT DOES NOT IMPOSE A  
DISPROPORTIONATE ADVERSE  
IMPACT ON ECONOMICALLY  
DISADVANTAGED OR  
MINORITY COMMUNITIES."**



**CHARLES CITY COUNTY  
IS NOT A SACRIFICIAL ZONE**



**CHICKAHOMINY POWER STATION**  
**PROPOSED ANNUAL RELEASES FOR GAS POWER PLANT AT CHARLES CITY CO, VIRGINIA**  
 CITED FROM 2019 VIRGINIA DEQ ENGINEERING ANALYSIS FOR CHICKAHOMINY POWER PLANT

POLLUTANT	ANNUAL AIR RELEASES 2019 AIR PERMIT	PUBLIC HEALTH IMPLICATIONS OF POLLUTANTS (EPA.GOV / CRITERIA-AIR-POLLUTANTS)
NITROGEN OXIDES (NOX)	407 TONS	INFLAMMATION OF THE AIRWAYS, DECREASED LUNG FUNCTION, INCREASED RISK OF RESPIRATORY CONDITIONS, AND INCREASED RESPONSE TO ALLERGENS.
CARBON MONOXIDE (CO)	323 TONS	VITAL ORGANS, SUCH AS THE BRAIN, NERVOUS TISSUES AND THE HEART, DO NOT RECEIVE ENOUGH OXYGEN TO WORK PROPERLY. PEOPLE HAVE TROUBLE CONCENTRATING, LOSE COORDINATION, AND FEEL TIRED.
VOLATILE ORGANIC COMPOUNDS (VOCs)	211 TONS	VOCs CAN IRRITATE THE EYES, NOSE AND THROAT, CAN CAUSE DIFFICULTY BREATHING AND NAUSEA, AND CAN DAMAGE THE CENTRAL NERVOUS SYSTEM AS WELL AS OTHER ORGANS.
PARTICULATE MATTER (PM)	169 TONS	EXPOSURE TO PM CAN LEAD TO PREMATURE MORTALITY, AGGRAVATION OF RESPIRATORY AND CARDIOVASCULAR DISEASE, DECREASED LUNG FUNCTION GROWTH, EXACERBATION OF ALLERGIC SYMPTOMS, ETC.
SULPHUR DIOXIDE (SO2)	62 TONS	EXPOSURE TO SO2 CAN HARM THE HUMAN RESPIRATORY SYSTEM AND MAKE BREATHING DIFFICULT; SO2 CONTRIBUTES TO ACID RAIN.
CARBON DIOXIDE EQUIVALENT (CO2E)	6,479,692 TONS	CONTRIBUTE TO CLIMATE CHANGE WITH RELATED HEALTH IMPACTS, SUCH AS INCREASES IN DISTRIBUTION AND/OR INTENSITY OF MOSQUITOES AND TICKS, ALLERGENS, NATURAL DISASTERS, ETC.
METHANE (CH4)	129.5 TONS	METHANE IS A POTENT GREENHOUSE GAS; METHANE GAS EXPOSURE CAN CAUSE HEADACHES, DIZZINESS, WEAKNESS, NAUSEA, VOMITING, AND LOSS OF COORDINATION.
SULFURIC ACID MIST (H2SO2)	65 TONS	TOOTH EROSION, IRRITATION OF SKIN, EYES, AND RESPIRATORY AND GASTROINTESTINAL TRACTS.
HAZARDOUS AIR POLLUTANTS (HAPS)	10.4 TONS	HAPS INCLUDE ACROLEIN, FORMALDEHYDE, BERYLLIUM, CADMIUM, CHROMIUM, LEAD, MERCURY, AND NICKEL. LEVELS OF FORMALDEHYDE ARE SIGNIFICANT AND MAY IRRITATE SKIN, EYES, NOSE, AND THROAT. HIGH LEVELS OF EXPOSURE MAY CAUSE SOME TYPES OF CANCERS.

**DEMAND CLEAN AIR AND WATER!**  
**NO FRACKED GAS INFRASTRUCTURE!**

**VIRGINIA RIVER HEALERS**



OWS Water Withdrawal, rr &lt;withdrawal.permitting@deq.virginia.gov&gt;

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**Deny special exception permit to Chickahominy Power LLC application**1 message

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Aileen Rivera <jgmoulds@aol.com>  
To: withdrawal.permitting@deq.virginia.gov  
Cc: nicoleandersonellis@gmail.com

Fri, Feb 14, 2020 at 4:57 PM

Dear Mr Grist and DEQ board members,

The Route 5 Corridor Coalition ( a group of local, regional, and state organizations) request that you deny the approval of the special exception permit for the Chickahominy Power LLC application, 13800 Coppermine Rd Ste 115, Herndon VA 20171; GW0078700 in Charles City County, Virginia. Not only are we in opposition to the permitting of groundwater withdrawal but we also stand against this fossil fuel infrastructure as it threatens the quality of life of residents in the corridor which goes against the core goals of the coalition.

The recent Union Hill case, *Friends of Buckingham v. State Air Pollution Control Board*, found DEQ's environmental justice review amounted to little more than checking a box and accepting on face value the deficient environmental justice analysis of the permittee in that case, Dominion Energy.

As a result DEQ lost that case and the permit was reversed. In light of that case, DEQ needs to reject Chickahominy Power, LLC's ground water withdrawal permit as incomplete and direct Chickahominy Power to reapply with a thorough environmental justice analysis consistent with the federal court Union Case decision.

DEQ's current environmental justice review is deficient and fails to meet the basic standards set out in the federal 4th Circuit Court decision.

Governor Northam signed an executive order setting a goal for the state to produce 100% of its electricity from carbon-free sources by 2050. This is not in accordance with that governor's plan nor with the vision of the Route 5 Corridor either.

We ask that you deny the special exception permit and require review of the entire project following new court decisions, local organizations and citizens participation.

Sincerely

Nicole Anderson Ellis

Aileen Rivera

Route 5 Corridor Coalition Members



2/17/2020

Commonwealth of Virginia Mail - Deny special exception permit to Chickahominy Power LLC application

info@route5va.org

"The Route 5 Corridor Coalition is a group of local, regional, and state organizations seeking to maximize the economic potential of this resource, while ensuring the proper preservation and respectful development to sustain it. We work to unite residents, landowners, and experts in tourism, agriculture, and planning to achieve this goal."

42





February 14, 2020

**BY ELECTRONIC AND UNITED STATES MAIL**

**Virginia State Water Control Board**  
**c/o Mr. Joseph Grist, Water Withdrawal Program Manager**  
DEPARTMENT OF ENVIRONMENTAL QUALITY  
1111 East Main Street, Suite 1400  
Post Office Box 1105  
Richmond, Virginia 23219  
*withdrawal.permitting@deq.virginia.gov*

**RE: Chickahominy Power LLC, Draft Special Exception No. GW0078700**

Dear Mr. Grist,

Please accept these comments and request for public hearing on behalf of the Sierra Club, the Chesapeake Climate Action Network (CCAN), Virginia Interfaith Power & Light (VAIPL), Concerned Citizens of Charles City County (C5), and Friends of Buckingham (FoB), opposing the Department of Environmental Quality's recommendation that the State Water Control Board (the Board) issue a seven-year special exception under Section 62.1-267 of the Ground Water Management Act of 1992<sup>1</sup> (the Act), authorizing Chickahominy Power LLC (Chickahominy) to withdraw 30 million gallons of groundwater annually from the Eastern Virginia Groundwater Management Area. In addition to the enclosed exhibits, the comments below are based on information reflected in the Department's November 22, 2019 Draft Special Exception Issuance Fact Sheet (Fact Sheet), as well as Chickahominy's February 25, 2019 Amended and Restated Application for Groundwater Withdrawal Permit (Chickahominy Groundwater Application).

The Department's most recent *State Water Resources Plan* warns that the aquifers beneath Virginia's coastal plain "are already oversubscribed" and their depletion already "contributing to increased land subsidence and saltwater intrusion."<sup>2</sup> To stave off the threat of "irreversible

<sup>1</sup> Virginia Code §§ 62.1-254—62.1-270.

<sup>2</sup> Virginia Department of Environmental Quality, *State Water Resources Plan* at 45 (October 2015), available at <https://bit.ly/2RN81ZZ> and enclosed as Exhibit 1 to these comments (hereinafter 2015 Water Resources Plan); see also *id.* at 100 (warning that "additional withdrawals from existing water sources will likely stress the sources and negatively impact beneficial users").

damage to the aquifer system,”<sup>3</sup> the Department undertook an initiative to negotiate concessions from existing users—including public water systems, which enjoy a favored status under the Act. The Department succeeded in convincing existing users to curb their use, sometimes at great cost. But any new withdrawals, the Plan states, demand “special concern.”<sup>4</sup>

Against that historical backdrop, the Department now recommends the Board exempt a new non-utility, merchant power plant from the Act’s general permitting requirement. The Department acknowledges that Chickahominy—unlike the existing permittees the Department has asked to sacrifice for the long-term stability of the aquifer—does not legally qualify for a groundwater permit under Section 62.1-266 of the Act. Although it satisfies some of the technical criteria for issuance, it falls short of meeting the multi-factor test set forth in the Board’s regulations and its request conflicts with the statutory priority for uses that “support human survival and health.” As such, the Department accurately concludes that issuing a permit to Chickahominy would not be “consistent with the . . . Act under these circumstances.”<sup>5</sup>

That should have ended the matter. Instead, the Department pivots to Section 62.1-267 of the Act, which allows the Board to exempt certain groundwater withdrawals from the Act’s general permitting requirement in “unusual situation[s] in which requiring the user to obtain a ground water withdrawal permit would be contrary to the intended purposes of the Act.”<sup>6</sup> In justifying its recommendation, the Department relies primarily on reasons why *issuing* (not *requiring*) a permit would be contrary to the Act. As detailed below, the Department’s justification reflects a misreading of Section 62.1-267 and a misunderstanding of the Board’s permitting authority. By attempting to expand a narrow exception reserved for “unusual situations” to fit the unextraordinary facts at hand, the Department invites the Board to transform the rarely-invoked special exception process into a loophole that would swallow the entire regulatory scheme. That interpretation would not only rewrite the law, it would render it unconstitutional.

In any case, Chickahominy fails to meet the legal standard for *either* form of authorization. Not only has Chickahominy failed to prove there is no practicable alternative to the proposed withdrawal, as the Board’s regulations require, it has definitely proven one exists. Chickahominy consciously chose to treat that alternative as, in its own words, a “fall-back,” while it pursued a groundwater allocation from the Board. That miscalculation, however, does not make the alternative measure any less practicable, nor does it entitle Chickahominy to a groundwater allocation it is otherwise unqualified for. Moreover, the alternatives analysis in the record is content to ignore the fact that a similar project, less than a mile from the Chickahominy site, succeeded in developing an alternative water supply without burdening the already-depleted groundwater reserves that its neighbors rely upon. Chickahominy fails to explain why its project

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3 *Id.* at 92.

4 *Id.* at 45.

5 Fact Sheet at 3.

6 Virginia Code § 62.1-267(A).

is so fundamentally different as to make that alternative impracticable. Nor does it explain why it chose to locate its plant in an area where groundwater is already over-subscribed, rather than a more suitable location within the thirteen-state energy market it hopes to participate in.

For those and other reasons detailed below, we urge the Board to uphold the plain language of the Act, reject the Department's recommendation, and deny the special exception.

## REGULATORY FRAMEWORK

The General Assembly enacted the Ground Water Management Act of 1992 upon finding that the "management and control of ground water resources is essential" if the Commonwealth is "to conserve, protect and beneficially utilize th[ose resources] and ensure the public welfare, safety and health."<sup>7</sup> To that end, the Act empowers the Board to declare ground water management areas in locations where ground water resources are endangered or compromised.<sup>8</sup> The Act then makes it "unlawful in a ground water management area for any person to withdraw, attempt to withdraw, or allow the withdrawal of any ground water, other than in accordance with a ground water withdrawal permit or" with several statutory exceptions.<sup>9</sup>

To obtain a permit to initiate a new groundwater withdrawal in a groundwater management area, an applicant must demonstrate "that the maximum safe supply of groundwater will be preserved and protected for all other beneficial uses and that the applicant's proposed withdrawal will have no significant unmitigated impact on existing groundwater users or the groundwater resource."<sup>10</sup> That standard requires several constituent findings. Most fundamentally, an applicant must "justify[ ] the need for future water supply" and "descri[be] the water supply issues that form the basis of the proposed withdrawal."<sup>11</sup>

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7 *Id.* § 62.1-254; 9 VAC § 25-610-20.

8 Virginia Code § 62.1-257; 9 VAC § 25-610-80. Specifically, the Board may declare an area to be a groundwater management area upon finding (1) "that the public welfare, safety and health require that regulatory efforts be initiated;" and (2) that either (a) "[g]round water levels in the area are dealing or are expected to decline excessively," (b) "wells of two or more ground water users within the area are interfering or may reasonably be expected to interfere substantially with one another," (c) "available ground water supply has been or may be overdrawn," or (d) "ground water in the area has been or may become polluted." *See, respectively*, Virginia Code §§ 62.1-257(B), 62.1-257(A)(1)-(4); 9 VAC §§ 25-610-80(A), 25-610-70(1)-(4).

9 Virginia Code § 62.1-258; 9 VAC § 25-610-40(A).

10 9 VAC § 25-610-110(D)(3).

11 *Id.* §§ 25-610-94(k), 25-610-102(A).

An applicant must also “demonstrate[ ] that no other sources of water supply, including reclaimed water, are practicable,”<sup>12</sup> that “the amount of groundwater withdrawal requested is the smallest amount . . . necessary to support the proposed beneficial use,”<sup>13</sup> and that “th[at] amount is representative of the amount necessary to support similar beneficial uses when adequate conservation measures are employed.”<sup>14</sup> This, in turn, requires the applicant submit an alternatives analysis,<sup>15</sup> demonstrating that all “[a]lternative sources of supply other than groundwater, including surface water and water reuse, were considered for use in the proposed activity”<sup>16</sup> and that the applicant has exhausted all “[p]racticable alternatives, including design alternatives, . . . for the proposed activity.”<sup>17</sup> In reviewing an alternatives analysis, the Board must ensure that “[m]easures that would avoid or result in less adverse impact to high quality groundwater [are] considered to the maximum extent practicable”<sup>18</sup> and that the applicant “[e]valuat[ed] the cost of the alternative[s] on an equivalent basis.”<sup>19</sup>

If an applicant demonstrates there are no practicable alternatives to a groundwater withdrawal, the Board must consider whether “[a]ll opportunities to reduce and minimize the use of groundwater have been identified” and whether “the requested amount is the minimum amount of groundwater necessary for the proposed activity.”<sup>20</sup> Accordingly, an applicant must develop and submit for Board approval a water conservation and management plan that attests to the use of all water-saving equipment and practices, implements water-loss reduction and water-use education programs, and accepts use restrictions during shortages.<sup>21</sup>

The Board must also perform a technical evaluation of the impact associated with the requested withdrawal.<sup>22</sup> The technical evaluation must demonstrate that the withdrawal will not result in the intrusion of salt water into freshwater aquifers or any other adverse effects from the movement of low-quality water into high-quality resources.<sup>23</sup> The technical evaluation must also demonstrate compliance with the “80% drawdown criterion”—a regulatory requirement that

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12 *Id.* § 25-610-110(D)(3)(a).

13 *Id.* § 25-610-110(D)(3)(d).

14 *Id.*

15 *Id.* § 25-610-94(2)(k).

16 *Id.* § 25-610-102(C)(3).

17 *Id.* § 25-610-102(C)(4).

18 *Id.*

19 *Id.* § 25-610-102(E)(4).

20 *Id.* § 25-610-102(C)(1).

21 Virginia Code § 62.1-262; 9 VAC §§ 25-610-94(2)(h), 25-610-100.

22 9 VAC § 25-610-110(D)(2).

23 *Id.* § 25-610-110(D)(3)(i).

“the stabilized effects from the proposed withdrawal in combination with the stabilized combined effects of all existing lawful withdrawals will not lower water levels, in any confined aquifer that the withdrawal impacts, below a point that represents 80% of the distance between the land surface and the top of the aquifer.”<sup>24</sup> The technical evaluation also determines the geographic area across which any withdrawal will produce at least one foot of decline in groundwater levels.<sup>25</sup> If that area exceeds the applicant’s property line, the applicant must submit an impact mitigation plan<sup>26</sup> establishing an efficient process for fairly resolving disputes over groundwater use.<sup>27</sup>

In determining whether the justification of need, the alternatives analysis, the water conservation plan, and the technical evaluation meet the regulatory standard, the Board must consider several overarching factors. The first is encoded in the Act itself: Section 62.1-263 provides that whenever “proposed uses of ground water are in conflict or when available supplies of ground water are insufficient for all who desire to use them, preference shall be given to uses for human consumption, above all others.”<sup>28</sup> The Board’s regulations in turn define “human consumption” as “the use of water to support human survival and health, including drinking, bathing, showering, cooking, dishwashing, and maintaining hygiene.”<sup>29</sup>

In addition to the statutory preference for human consumption, the Board’s regulations require it also consider, among other things, the “nature of the use of the proposed withdrawal”<sup>30</sup> and the “public benefit provided [there]by;”<sup>31</sup> any relevant “[c]limatic” or “economic cycles;”<sup>32</sup> available “[p]opulation and water demand projections during the term of the proposed permit;”<sup>33</sup> the current “status of land use and other necessary approvals;”<sup>34</sup> and, finally, any “[o]ther factors that the board deems appropriate.”<sup>35</sup>

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24 *Id.* § 25-610-110(D)(3)(h).

25 *Id.* § 25-610-110(D)(2).

26 *Id.* § 25-610-94(2)(l).

27 *Id.* § 25-610-110(D)(3)(g).

28 Virginia Code § 62.1-263.

29 9 VAC § 25-610-10 (definition of “human consumption”).

30 *Id.* § 25-610-110(D)(4)(a).

31 *Id.* § 25-610-110(D)(4)(b).

32 *Id.* § 25-610-110(D)(4)(e)–(f).

33 *Id.* § 25-610-110(D)(4)(h).

34 *Id.* § 25-610-110(D)(4)(i).

35 *Id.* § 25-610-110(D)(4)(j).

If a permit request fails to meet any of the requirements outlined above, the Department “shall make a decision to tentatively deny the permit.”<sup>36</sup> If, however, the applicant’s submissions and the technical evaluation, considered alongside the factors enumerated above, demonstrate “that the maximum safe supply of groundwater will be preserved and protected for all other beneficial uses and that the applicant’s proposed withdrawal will have no significant unmitigated impact on existing groundwater users or the groundwater resource,” then the Board may issue a withdrawal permit under Section 62.1-266 of the Act.<sup>37</sup>

The Act and the Board’s regulations, however, demand that a permit include several important terms and conditions. By statute, a permit must include limits on the amount of the withdrawal, not to exceed “that [which] can be applied to the proposed beneficial use.”<sup>38</sup> The permit must also include monitoring and reporting requirements,<sup>39</sup> as well as restrictions on the placement of pumps to “prevent dewatering of a confined aquifer, loss of inelastic storage, or damage to the aquifer from compaction.”<sup>40</sup> Finally, a withdrawal permit must include “an effective [date] and expiration date[,] which will determine the life of the permit.”<sup>41</sup> Both the Act and the Board’s regulations require a permit “have a fixed term *not to exceed* 15 years.”<sup>42</sup> Importantly, however, the Board’s regulations indicate that “[p]ermit duration of less than the maximum period of time may be recommended in areas where hydrologic conditions are changing or are not adequately known.”<sup>43</sup>

The permitting process remains the primary means of implementing the Act’s policy of “manag[ing] and control[ing] ground water resources”<sup>44</sup> in a manner that prioritizes “uses for human consumption, above all others.”<sup>45</sup> The General Assembly anticipated, however, that there may be “unusual situation[s] in which requiring a [groundwater] user to obtain a ground water withdrawal permit would be contrary to the intended purpose of the Act.”<sup>46</sup> In that situation,

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36 *Id.* § 25-610-340(A); *see also id.* § 25-610-340(E) (allowing applicant to challenge tentative denial through informal fact finding).

37 *Id.* § 25-610-110(D)(3); Virginia Code § 62.1-263.

38 Virginia Code § 62.1-263

39 9 VAC § 25-610-140(A)(7), (9).

40 *Id.* § 25-610-140(A)(6).

41 *Id.* § 25-610-140(A)(10).

42 *Id.*; Virginia Code § 62.1-266 (emphasis added).

43 9 VAC § 25-610-140(A)(10).

44 Virginia Code § 62.1-254.

45 *Id.* § 62.1-263.

46 *Id.* § 62.1-267(A).

Section 62.1-267 of the Act allows (but does not require) the Board to “issue a special exception to allow the withdrawal of ground water” without a permit.<sup>47</sup>

In deciding whether to issue a special exception, the Board may consider “the amount and duration of the proposed withdrawal, the beneficial use intended for the ground water, the return of the ground water to the aquifer, and the effect of the withdrawal on human health and the environment.”<sup>48</sup> The Board may also consider the same criteria and overarching factors it uses to evaluate permit applications,<sup>49</sup> and it can incorporate into a special exception any of the terms and conditions required of withdrawal permits.<sup>50</sup> If the Board determines an application lacks sufficient information to justify a special exception, it is obligated to “require the submission of additional information.”<sup>51</sup> It may also “suspend processing of any application until such time as the applicant has supplied missing or deficient information.”<sup>52</sup> Like permits, special exceptions cannot exceed a term of fifteen years.<sup>53</sup> Unlike permits, however, special exceptions cannot be renewed at the conclusion of their term.<sup>54</sup> Accordingly, any special exception holder who wishes to continue using groundwater beyond the term of the exception must apply for a full permit.<sup>55</sup>

Consistent with the statutory limitation that special exceptions issue only in “unusual situation[s],”<sup>56</sup> the Board has awarded only six since passage of the Act in 1992.<sup>57</sup> All six

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47 *Id.* §§ 62.1-259(x), 62.1-267(A).

48 *Id.* § 62.1-267(B).

49 9 VAC §§ 25-610-190(B), 25-610-180(A).

50 *Id.* §§ 25-610-180(B), 25-610-220.

51 *Id.* § 25-610-170(D).

52 *Id.*

53 Virginia Code § 62.1-267(C).

54 9 VAC § 25-610-220.

55 *Id.*

56 Virginia Code § 62.1-267(A).

57 On January 14, 2020, counsel for the Sierra Club submitted a request under the Virginia Freedom of Information Act, Virginia Code §§ 2.2-3700–2.2-3715, seeking documentation of any special exceptions issued under Section 62.1-267 within the past twenty years. *See* Appalachian Mountain Advocates, Virginia Freedom of Information Act Request to State Water Control Board (January 14, 2020), enclosed as Exhibit 2 to these comments. The Department responded that no such records exist, *see* Exhibit 3, but subsequently provided records of special exceptions issued outside of the twenty-year time period. *See* Exhibit 4 (Special Exception No. GW0032200); Exhibit 5 (Special Exception No. GW0033600); Exhibit 6 (Special Exception No. GW0036800); Exhibit 7 (Special Exception No. GW0038200); Exhibit 8 (Special Exception No. GW0040700); Exhibit 9 (Special Exception

exceptions were designed either to bring previously unregulated withdrawals into compliance with the Act<sup>58</sup> or to facilitate their termination.<sup>59</sup> Of those, four involved public water supplies,<sup>60</sup> and therefore implicated the Act's policy of prioritizing "uses for human consumption above all others."<sup>61</sup> The other two involved proposals to alter existing groundwater practices in a way that enhanced baseline hydrological conditions.<sup>62</sup> The Board has not issued a special exception since February of 1998, and the last exception expired on its own terms in early 2008.<sup>63</sup>

## PROPOSED PROJECT

Chickahominy Power proposes to construct a 1600-megawatt natural gas-fired power plant near the intersection of Chambers Road and State Road 106 in Charles City County, Virginia.<sup>64</sup> The project is designed to generate electricity for PJM's wholesale electricity market, which spans across thirteen states and the District of Columbia.<sup>65</sup> As proposed, the facility will be a 3×3 combined-cycle plant, meaning it will employ three combustion turbines, each providing steam to

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No. GW0040800); *see also* Exhibit 10 (intra-Departmental e-mail acknowledging that "[r]ecords show only 6 [special exception] cases since the program start").

58 *See* Exhibit 4 (at least six years); Exhibit 5 (since the 1960s); Exhibit 6 (twenty years) Exhibit 7 (since 1980); Exhibit 9 (more than forty years).

59 Exhibit 8 (allowing for withdrawal from the underused Columbia Aquifer rather than continuing existing water withdrawal from the overused Potomac Aquifer).

60 *See* Exhibit 4 (C&P Suffolk Water Company); Exhibit 5 (Tidewater Water Company); Exhibit 7 (Trails End Utility Company); Exhibit 9 (Indian River Water System).

61 Virginia Code § 62.1-263.

62 *See* Exhibit 6 (requiring secondary use of existing water withdrawals rather than prior practice of discharging withdrawn water to waste); Exhibit 8 (shifting existing water withdrawal from the overused Potomac Aquifer to the underused Columbia Aquifer).

63 According to the Department's records, the last special exception issued under Virginia Code § 62.1-267 expired in January of 2008. *See* Exhibit 7 (Special Exception No. GW0038200).

64 Fact Sheet at 2.

65 The PJM Interconnection is an independent, interstate grid operator, named for the first three states it served: Pennsylvania, [New] Jersey, and Maryland. PJM has since expanded into Virginia, among other states, and currently operates wholesale energy and capacity markets for the thirteen states within its transmission system. *See* PJM Interconnection, *Who We Are*, <https://www.pjm.com/about-pjm/who-we-are.aspx> (September 17, 2019), also available at <https://bit.ly/31D5k1E>.



one of three heat recovery steam generators.<sup>66</sup> Chickahominy requires water to operate evaporative coolers for the turbines and as boiler make up water.<sup>67</sup>

Chickahominy initially proposed meeting its water needs by piping surface water from the James River, approximately ten miles to the south.<sup>68</sup> After receiving approval from the State Corporation Commission to construct the plant in accordance with that proposal,<sup>69</sup> however, Chickahominy abandoned it, citing the need for water pretreatment, the potential for “reliability concerns” due to the “complexity” of the project, and the “belie[f]” that the project “would result in significant permitting challenges.”<sup>70</sup> Chickahominy now seeks approval to withdraw up to 30 million gallons annually from the aquifer beneath the site,<sup>71</sup> which lies within the Eastern Virginia Groundwater Management Area.<sup>72</sup>

For reasons discussed more fully below, Chickahominy’s proposal cannot be viewed in isolation from a competing project located within a mile of the project site. Another merchant generator, C4GT LLC, seeks to build a 1060-megawatt combined cycle natural gas-fired plant on the other side of Roxbury Road.<sup>73</sup> Like Chickahominy, C4GT requires cooling water—and significantly more of it<sup>74</sup>—in order to operate its facility. Instead of groundwater, however, the C4GT plant, as

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66 See Virginia Department of Environmental Quality, Engineering Analysis for Balico LLC / Chickahominy Power, Prevention of Significant Deterioration Permit No. 52610-001 at 1 (May 28, 2019), available at <https://bit.ly/2Gaaecv> and enclosed as Exhibit 11 to these comments (hereinafter Engineering Analysis).

67 Fact Sheet at 4.

68 *Id.* at 6.

69 *Application of Chickahominy Power*, Virginia State Corporation Commission Case No. PUR-2017-00033, Report of Hearing Examiner at 9 (April 13, 2018), available at <https://bit.ly/30GlCq2> and enclosed as Exhibit 12 to these comments (hereinafter Hearing Examiner’s Report) (describing Chickahominy’s original proposal for “cooling water for the Facility [to] be supplied from the James River” and an on-site well for potable water only); *Application of Chickahominy Power*, Virginia State Corporation Commission Case No. PUR-2017-00033, Final Order at 10–11 (May 8, 2018), available at <https://bit.ly/2TWiKnV> and enclosed as Exhibit 13 to these comments (hereinafter Chickahominy Final Order).

70 Fact Sheet at 6.

71 *Id.* at 8.

72 9 VAC § 25-600-20(A).

73 *Application of C4GT*, Virginia State Corporation Commission Case No. PUE-2016-00104, Final Order at 1 (May 3, 2017), available at <https://bit.ly/3aAQdtY> and enclosed as Exhibit 14 to these comments (hereinafter C4GT Order).

74 Compare Fact Sheet at 5 (stating that Chickahominy proposes an annual withdrawal of 30 million gallons of groundwater), with Virginia Department of Environmental Quality, Fact

approved by the State Corporation Commission, will “withdraw water from, and discharge water into, the James River by two subsurface water pipelines that would extend approximately 12 miles from the Facility to Shirley Cove.”<sup>75</sup> In fall of 2017, the Department issued a Virginia Water Protection (VWP) Permit to C4GT, allowing it to withdraw more than 2.7 billion gallons annually from the James River.<sup>76</sup> In issuing that permit, the Department represented that, assuming C4GT complied with its terms and conditions, “there is a reasonable assurance that the activity authorized . . . will protect instream beneficial uses, will not violate applicable water quality standards, and will not cause or contribute to significant impairment of state waters or fish and wildlife resources.”<sup>77</sup>

## COMMENTS

### **Comment No. 1: The Department correctly concludes that issuing a groundwater permit in this case would be inconsistent with the text and spirit of the Act.<sup>78</sup>**

Chickahominy proposes to withdraw groundwater from an aquifer that can ill-afford it. In acknowledging that “the requested groundwater withdrawal is within an area that has incurred an overall decline in the Potomac Aquifer,”<sup>79</sup> the Department understates the case. Outside of the permitting process, the Department has been far more candid: throughout the Eastern Coastal Plain, “groundwater resources are *already* oversubscribed, not sustainable for the long term at

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Sheet for Charles City County Combined Cycle Combustion Turbine Power Plant, Virginia Water Protection Permit No. 16-1604 at 3 (September 1, 2017), enclosed as Exhibit 15 to these comments (hereinafter C4GT Fact Sheet) (stating that C4GT proposes an annual withdrawal of 3.6 billion gallons).

<sup>75</sup> *Id.* at 6 n.8.

<sup>76</sup> Virginia Department of Environmental Quality, Surface Water Withdrawal Permits (February 5, 2019), available at <https://bit.ly/2ulejb7> and enclosed as Exhibit 16 to these comments.

<sup>77</sup> See C4GT Fact Sheet, *supra* note 74, at 1; see also C4GT Final Order, *supra* note 73, at 10 (similarly finding that “any adverse environmental impacts” associated with C4GT’s surface water withdrawal can be “reasonably minimized”).

<sup>78</sup> Comment No. 1 was prepared in coordination with Dr. Christopher Miller, former program manager in the National Oceanic and Atmospheric Administration’s Climate Program Office. Dr. Miller holds a B.S. degree in physics from John Carroll University, an M.S. degree in oceanography from New York University, and a Ph.D. in geophysical fluid dynamics from Florida State University. He worked for twenty years in private industry, consulting on coastal processes and coastal engineering project, before joining NOAA in 1992, where he managed the climate monitoring research grants program in NOAA’s Climate Program Office. He retired from NOAA in 2013.

<sup>79</sup> Fact Sheet at 3.

current use, and are contributing to increased land subsidence and saltwater intrusion potential.”<sup>80</sup> In response to this “ongoing and long-term decline of groundwater levels,” the Department undertook a Coastal Plain Groundwater Initiative to negotiate potential reductions in water withdrawals by the fourteen largest groundwater users in the Eastern Virginia Groundwater Management Area.<sup>81</sup> Although the initiative achieved a state of “tenuous sustainability,”<sup>82</sup> the Department itself admitted that those “permit reductions alone would not solve the problem.”<sup>83</sup> Sure enough, the Department’s most recent report on Virginia’s water resources confirms that “[i]ncreased permitting and identification of unreported groundwater withdrawals across Virginia show increased demands placed on groundwater availability, especially in the Groundwater Management Areas.”<sup>84</sup> As a result, “[g]roundwater availability in some areas of the Coastal Plain, particularly around large industrial or municipal withdrawals, leaves no excess supply, which limits the ability for DEQ to issue permits.”<sup>85</sup>

Unfortunately, groundwater supply is not the only concern. Groundwater depletion can also lead to land subsidence, reductions in surface water flows and spring discharges, and loss of wetlands.<sup>86</sup> The Department has recognized these additional impacts of unsustainable

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80 2015 Water Resources Plan, *supra* note 2, at 45; *see also id.* at 92–95 (concluding that “if withdrawals were to occur at the projected water supply planning rates,” areas within the Aquia, Potomac, and Piney Point Aquifers “would be overdrawn in a non-sustainable way, resulting in reduced head and potentially irreversible damage to the aquifer system that may result in increases in saltwater intrusion and land subsidence”).

81 Virginia Department of Environmental Quality, *Status of Virginia’s Water Resources: A Report on Virginia’s Water Resources Management Activities* at 6 (October 2019), available at <https://bit.ly/37nkRok> and enclosed as Exhibit 17 to these comments (hereinafter 2019 Water Resources Report).

82 *See* Joint Legislative Audit & Review Commission, *Effectiveness of Virginia’s Water Resource Planning & Management*, House Document No. 8 at i (October 2016), available at <https://bit.ly/36hr97K> and enclosed as Exhibit 18 to these comments.

83 Eastern Virginia Groundwater Management Advisory Committee, *Report to the Virginia Department of Environmental Quality & Virginia General Assembly* at 15 (July 2017), available at <https://bit.ly/2NVTb2r> and enclosed as Exhibit 19 to these comments. The Eastern Virginia Groundwater Management Advisory Committee was commissioned by the General Assembly to assist the Department in “developing, revising, and implementing a management strategy for ground water in the Eastern Virginia Groundwater Management Area.” *Id.* at 50.

84 *See* 2019 Water Resources Report, *supra* note 81, at vii.

85 *Id.* at vi.

86 United States Geological Survey, *Sustainability of Groundwater Supplies in the Northern Atlantic Coastal Plain Aquifer System* at 4 (August 2016), available at <https://on.doi.gov/2sARPme> and enclosed as Exhibit 20 to these comments.

groundwater use, reporting that “ongoing and long-term decline of groundwater levels” in Eastern Virginia gives rise to “growing concerns about land subsidence and salt water intrusion in the confined Coastal Plain aquifer system.”<sup>87</sup> The General Assembly has echoed that sentiment in at least one formal, legislative enactment.<sup>88</sup>

The dangers associated with subsidence are particularly acute when considered alongside sea level rise—an “ever-present threat to coastal Virginia,”<sup>89</sup> and one that many low-lying communities are already facing.<sup>90</sup> Water levels in portions of eastern Virginia are now 18 inches higher than they were a century ago,<sup>91</sup> and the neighboring Middle Peninsula is “already responding to sea level rise and associated salt intrusion.”<sup>92</sup> This is significant because groundwater withdrawal-related subsidence and sea level rise mutually influence and exacerbate each other. Excessive groundwater withdrawal can cause the “relative sea level rise” (RSLR) in areas like the Virginia coastal plain to exceed the global average sea level rise seen worldwide. In fact, subsidence in eastern Virginia has contributed to the highest rates of RSLR seen anywhere along the East Coast,<sup>93</sup> and groundwater withdrawal-related subsidence has “a particularly large impact on local sea level in Virginia.”<sup>94</sup>

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87 See 2019 Water Resources Report, *supra* note 81, at 6.

88 Virginia Senate Joint Resolution No. 272 (February 26, 2015), available at <https://bit.ly/36soZ5c> and enclosed as Exhibit 21 to these comments (hereinafter Joint Resolution No. 272).

89 Alison Wrynn & Sarah Simonetti, *Planning for the “New Normal:” Using Build One Portsmouth to Address Flood Resilience* at 3 (Spring 2019), available at <https://bit.ly/31PdV1l> and enclosed as Exhibit 22 to these comments.

90 Tal Ezar & Larry P. Atkinson, *Sea Level Rise in Virginia: Causes, Effects & Response*, 66 VIRGINIA JOURNAL OF SCIENCE 356, 363 (2015), available at <https://bit.ly/31SqqcI> and enclosed as Exhibit 23 to these comments.

91 Virginia Executive Order No. 24 at 1 (November 2, 2018), available at <https://bit.ly/2H6XzI9> and enclosed as Exhibit 24 to these comments; see also Virginia Governor’s Commission on Climate Change, *Final Report: A Climate Change Action Plan* at 5 (December 15, 2008), available at <https://bit.ly/2vTkpAy> and enclosed as Exhibit 25 to these comments (“Sea level rise is a major concern for coastal Virginia.”).

92 William G. Reay & Sandra Y. Erdle, *Sea Level Rise: Local Fact Sheet for the Middle Peninsula, Virginia* at 3 (September 2011), available at <https://bit.ly/2SIIG9J> and enclosed as Exhibit 26 to these comments.

93 George Van Houtven *et al.*, *Costs of Doing Nothing: Economic Consequences of Not Adapting to Sea Level Rise in the Hampton Roads Region* at ES-1 (November 2016), available at <https://bit.ly/38sQSMA>.

94 Ezar & Atkinson, *supra* note 90, at 360.

Any additional increment in the RSLR increases the likelihood that coastal defenses like dunes, levees, and seawalls will be overtopped and landward communities will suffer widespread flooding. Even a small, vertical change in the relative water level can be the difference between coastal communities remaining dry or being flooded. And if previously dry land is overtaken by seawater, that saltwater can travel downward into the underlying aquifers, ultimately leading to more saltwater intrusion and contamination of groundwater. In short, every incremental addition to the groundwater draw in eastern Virginia increases the risk that RSLR will exceed critical thresholds for the protection of coastal communities and the aquifers they rely on.

Those considerations all reinforce the expert consensus that groundwater depletion in Eastern Virginia “remains a clear and present danger.”<sup>95</sup> Water withdrawals are simply unsustainable at current levels—even after existing residential, commercial, and industrial users have agreed to dial back groundwater withdrawals, often at great cost.<sup>96</sup> Permitting a new, industrial draw on the aquifer’s hydrological budget is particularly inappropriate at a time when consumers—whose demand for groundwater is to take top priority “over all others”<sup>97</sup>—have been asked to curtail their *existing* withdrawals.<sup>98</sup> As the Department’s own internal records attest: “Issuance of a Groundwater Withdrawal Permit in this case . . . potentially undermines successful efforts to reduce withdrawal limits by existing permittees.”<sup>99</sup>

It would also undermine the Department’s own action with regard to Chickahominy’s sister-plant. In 2017, the Department considered whether C4GT’s facility, located within a mile of the Chickahominy site, could supply its water needs with groundwater. The Department concluded that “[e]xisting issues with groundwater depletion in the regional aquifers of the Virginia coastal plain makes using deeper regional aquifers, such as the Potomac, unlikely to permit.”<sup>100</sup> As the Department has recognized, the strain on the aquifer has only grown since that time.<sup>101</sup> The recommendation before the Board, then, represents an “unexplained change from prior

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95 Jonathan Lubrano & Jeffrey Moore, *Water Supply Planning in Virginia: The Future of Groundwater & Surface Water* at 9 (2018), available at <https://bit.ly/2RQrSHF> and enclosed as Exhibit 27 to these comments.

96 Joint Legislative Audit & Review Commission, *supra* note 82, at 12.

97 Virginia Code § 62.1-263.

98 See Joint Legislative Audit & Review Commission, *supra* note 82, at 40; see also Dave Ress, *DEQ: Cutting Groundwater Draws Likely to Stabilize Supply*, DAILY PRESS (October 24, 2017), available at <https://bit.ly/375lxi0> and enclosed as Exhibit 28 to these comments.

99 See Exhibit 29, Attachment at 2 (July 9, 2019 draft of special exception justification).

100 See C4GT Fact Sheet, *supra* note 74, at 4.

101 See 2019 Water Resources Report, *supra* note 81, at 21 (documenting a 7% increase in reported groundwater withdrawals compared to a five-year average).

decisions,” which could, if followed, “render [the Board’s] decision arbitrary and capricious” under Virginia law.<sup>102</sup>

As the Department’s own Office of Water Supply has put it, *even if* “a technical evaluation of the Chickahominy Power application may [not] result in . . . additional critical cells within the Potomac aquifer locally, the issuance of a groundwater permit for non-human consumption uses, in an area that has already been identified with critical cell issues, can be argued as contrary to the intended purpose of the Act”—particularly in light of Section 62.1-263’s mandate that “the maximum possible safe supply of groundwater will be preserved and protected for all beneficial uses, with preference given to uses for human consumption over all others.”<sup>103</sup> As the comments below illustrate, the commenters disagree with much of the Department’s recommendation. But on the impropriety of a groundwater permit, we are in full agreement.<sup>104</sup>

**Comment No. 2: The Department has failed to justify the use of a special exception given the unexceptional facts at hand.**

The Department has presented a compelling argument why issuing a full permit to Chickahominy would be contrary to the Act. But instead of recommending denial of the permit, as the Board’s regulations require,<sup>105</sup> the Department lays out a meandering and difficult-to-follow justification for instead issuing a special exception. It appears to hang that recommendation on three facts:

- (1) that “the proposed beneficial use is not for human consumption;”
- (2) that “the requested groundwater withdrawal is in an area that has incurred an overall decline in the Potomac Aquifer;” and
- (3) that “viable alternative water sources will be available within 7 years.”<sup>106</sup>

In light of those facts, the Department states that it “does not believe the *issuance* of a typical groundwater permit is consistent with the Groundwater Management Act.”<sup>107</sup>

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102 See *NRV Real Estate v. Virginia Department of Health*, 51 Va. App. 514, 532 (2008) (citing *National Cable & Telecommunications Association v. Brand X Internet Services*, 545 U.S. 967, 981 (2005)), *reversed on other grounds*, 278 Va. 181 (2009).

103 See Exhibit 30 at 2 (July 19, 2019 memorandum from Scott Kudlas to David K. Paylor).

104 At least with regard to the propriety of a groundwater permit, the only point on which the commenters disagree with the Department is its belief that, “[i]f authorized by a permit, [a] proposed withdrawal *would* allocate a new withdrawal in the Potomac Aquifer . . . *for a fifteen year permit term or longer* if renewed.” See Fact Sheet at 4 (emphases added). As discussed below in Comment No. 2, the Department is mistaken on that point. See *infra* notes 124–126 and accompanying text.

105 9 VAC § 25-610-340(A).

106 Fact Sheet at 3.

As detailed above, the Club agrees with that conclusion. But whether *issuance* of a permit is consistent with Act is not the relevant question in considering a special exception. Rather, the statute demands the Board consider whether “*requiring* the user to obtain a ground water withdrawal permit would be contrary to the intended purpose of the Act.”<sup>108</sup> And *requiring* a permit is very different from *issuing* one—much as requiring a license to drive is not the same as issuing one to anyone who wants to take the wheel. Requiring a license to drive is not generally inconsistent with the policies that underlie the licensing scheme. Certainly, there may be cases where requiring a license would be inconsistent with those policy considerations: for example, the state’s interest in “public safety and welfare” may be better served by an experienced driver with an expired license driving home an impaired but actively licensed driver.<sup>109</sup> But unless the legislature is presumed to have designed a permitting scheme at odds with its intended purpose, requiring a permit will be inconsistent with that purpose only, as Section 62.1-267 of the Act reflects, in “unusual situation[s].”

If all it takes to justify a special exception is to explain why issuing a permit is inconsistent with the Act, then there really *is* no permitting program. Conflating the terms “requiring” and “issuing,” as the Department does in its justification,<sup>110</sup> renders the entire program meaningless and the permitting process superfluous. The Board cannot, under Virginia law, adopt an interpretation of the Act that renders the permitting scheme inconsequential and utterly powerless “to remedy the mischief at which it is directed.”<sup>111</sup>

The Department and the Board have historically taken the “unusual situation” requirement seriously. While there are 333 active withdrawal permits as of August 2019,<sup>112</sup> there is not a single active special exception<sup>113</sup>—nor has there been for over a decade.<sup>114</sup> In fact, the Board has issued

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107 *Id.* (emphasis added).

108 Virginia Code § 62.1-267(A) (emphasis added).

109 See *Thompson v. Smith*, 155 Va. 367, 377 (1930) (affirming the propriety of a driver’s licensing scheme that regulates the “right of a citizen to travel upon the public highways . . . in the interest of the public safety and welfare”).

110 See Fact Sheet at 3 (“DEQ does not believe the issuance of a typical groundwater withdrawal permit is consistent with the Groundwater Management Act.”).

111 Cf. *Neal v. Fairfax County Police Department*, 295 Va. 334, 344 (2018) (“Every statute is to be read so as to promote the ability of the enactment to remedy the mischief at which it is directed.”) (quoting *King & Queen County Board of Supervisors v. King Land Corporation*, 238 Va. 97, 103 (1989)).

112 2019 Water Resources Report, *supra* note 81, at 6.

113 See Exhibits 2–3, *supra* note 57.

114 According to the Department’s records, the last special exception issued under Section 62.1-267 expired in January of 2008. See Exhibit 7 (Special Exception No. GW0038200).

only six special exceptions since passage of the Act in 1992.<sup>115</sup> Of those six, four involved public water supply systems;<sup>116</sup> five involved long-standing historical withdrawals;<sup>117</sup> and two involved proposals that would entail significant improvements to baseline hydrological conditions.<sup>118</sup> Each of the six special exceptions issued by the Board was based on at least one of those mitigating circumstances; Chickahominy's proposal benefits from none of them.

Indeed, *none* of the facts the Department marshals in support of its recommendation suggest the case at hand represents the kind of "unusual situation in which *requiring* the user to obtain a ground water withdrawal permit would be contrary to the intended purpose of the Act."<sup>119</sup> Each of the "facts" outlined in the Department's justification for a special exception are either thoroughly unextraordinary or demonstrably untrue:

- (1) There is nothing unusual about the fact that "the proposed beneficial use is not for human consumption."<sup>120</sup> The prospect that non-human-consumption users will require (and request) groundwater permits is implicit in the Act's statutory mandate to prioritize human-consumption-uses "over all others."<sup>121</sup> Similarly, the Board's permitting regulations specifically lay out procedures for industrial (i.e. non-human-consumption) users to apply for standard groundwater withdrawal permits.<sup>122</sup> To the extent it is at all relevant that Chickahominy proposes a non-human-consumption use, it is only because

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115 See Exhibit 4 (Special Exception No. GW0032200); Exhibit 5 (Special Exception No. GW0033600); Exhibit 6 (Special Exception No. GW0036800); Exhibit 7 (Special Exception No. GW0038200); Exhibit 8 (Special Exception No. GW0040700); Exhibit 9 (Special Exception No. GW0040800).

116 See Exhibit 4 (C&P Suffolk Water Company); Exhibit 5 (Tidewater Water Company); Exhibit 7 (Trails End Utility Company); Exhibit 9 (Indian River Water System).

117 See Exhibit 4 (at least six years); Exhibit 5 (since the 1960s); Exhibit 6 (twenty years) Exhibit 7 (since 1980); Exhibit 9 (more than forty years).

118 See Exhibit 6 (awarding special exception to project that would entail secondary use of existing water withdrawals rather than prior practice of discharging as wastewater); Exhibit 8 (shifting existing water withdrawal from the overused Potomac Aquifer to the underused Columbia Aquifer); *see also* Carol Vaughn, *Expert Addresses Fear Over Drinking Water Supplies on Virginia Shore*, DELMARVA NOW (April 11, 2018), available at <https://bit.ly/2Gnmzdv> and enclosed as Exhibit 31 to these comments (reporting opinion of the technical advisor to the Eastern Shore Groundwater Committee that the "Columbia aquifer is underused" and should be preferred as water supply source).

119 Virginia Code § 62.1-267(A) (emphasis added).

120 Fact Sheet at 3.

121 Virginia Code § 62.1-263.

122 See, e.g., 9 VAC §§ 25-610-100(B)(2), 25-610-102(B)(4).



the statutory preference for human-consumption-uses renders *issuing* a permit—rather than *requiring* one—inconsistent with the Act. As discussed above, that distinction is critical, and the Department does not explain why *requiring* a non-human-consumption user to obtain a groundwater permit is contrary to the Act.<sup>123</sup>

- (2) The Department’s assertion that, “[i]f authorized by a permit, the proposed withdrawal *would* allocate a new withdraw in the Potomac Aquifer . . . for a fifteen year permit term or longer if renewed,”<sup>124</sup> reflects a misunderstanding of the permitting program. The Act, the Board’s regulations, and the Department’s groundwater permitting manual all agree that the term of a withdrawal permit cannot “*exceed* 15 years.”<sup>125</sup> In fact, the Board’s regulations specifically recommend imposing a shorter term on a standard groundwater permit when “hydrological conditions are changing.”<sup>126</sup> The Department is therefore incorrect in suggesting to the Board that an alternate process (*i.e.*, the standard withdrawal permitting process) would necessary entail a larger or longer-term impact on the aquifer.

The Department doubles-down on its error by suggesting a standard permit could impact the Aquifer for even *longer* than fifteen years “if renewed.”<sup>127</sup> Again, the Department mischaracterizes the permitting process set forth in the Board’s regulations. At the end of a permit’s term, an applicant must *reapply* for—not merely “renew”—a permit.<sup>128</sup> And in

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123 By contrast, an “unusual situation” that might justify a special exception could be one in which an aquifer’s hydrological budget has been previously allocated to industrial users, but circumstances change unforeseeably such that additional water is urgently needed for human consumption. Even though the withdrawal for human consumption might not meet the technical standards for a withdrawal permit—it may not, for example, strictly satisfy the 80% criterion in 9 VAC § 25-610-110(D)(3)(h)—the Board could find that an absolute prohibition under the circumstances would be inconsistent with the Act’s manifest intent to prioritize human consumptive uses above all others. *See* Virginia Code § 62.1-263.

124 Fact Sheet at 4 (emphasis added).

125 Virginia Code § 62.1-266(C); 9 VAC § 25-610-140(A)(10) (emphasis added); Virginia Department of Environmental Quality, *Ground Water Withdrawal Permit Procedures Manual* at 32 (June 1, 2006), available at <https://bit.ly/36fLALy> and enclosed as Exhibit 32 to these comments (hereinafter *Withdrawal Permit Manual*) (instructing permit writers that a permit’s “expiration date shall be the last day of the month of signature, nor [sic] more that [sic] 10 years in the future”).

126 9 VAC § 25-610-140(A)(10).

127 Fact Sheet at 4 (“If authorized by a permit, the proposed withdrawal *would* allocate a new withdrawal in the Potomac Aquifer . . . for a fifteen year permit term or longer if renewed.”) (emphasis added).

128 Virginia Code § 62.1-266(C); 9 VAC § 25-610-96(A).

considering whether or not to reissue the permit, the Board must put it on the same footing as a new withdrawal: the permittee must submit the same information as a new applicant,<sup>129</sup> the Board must apply the same criteria for issuance,<sup>130</sup> and the regulations expressly forbid the Board from reissuing a permit based solely on “[e]xisting permitted withdrawal amounts.”<sup>131</sup> In short, it is the *Board*, not the applicant, who would decide whether to renew the permit, and the Board could only do so if it found the withdrawal consistent with the Act’s demanding standards. If continued withdrawals would be inconsistent with the Act—as the Department implies would be the case after seven years—then the Board would be *required* to deny the renewal application. The Board should therefore disregard any implication that it would be powerless in the face of a request to renew a permit it determined was detrimental to the health of the aquifer or otherwise contrary to the Act.

- (3) The prospect that alternative sources of supply may materialize in the future<sup>132</sup> is decidedly *not* an unusual situation. The Act’s permitting scheme applies only in designated Groundwater Management Areas, where groundwater resources are already threatened. Under the circumstances that define a Groundwater Management Area, it would be unusual if utilities and other groundwater users were *not* seeking out alternative sources of supply. A situation that commonly underlies *all* withdrawal requests cannot be considered “unusual” in any meaningful sense.<sup>133</sup> Moreover, the Board’s permitting regulations explicitly contemplate the award of a permit for a term of less than fifteen years where water availability may be changing.<sup>134</sup> If the Board’s regulations contemplate changing availability as a consideration in the standard permitting process, it cannot constitute an “unusual situation” in which following that process would be “contrary to the inten[t] of the Act.”<sup>135</sup>

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129 9 VAC § 25-610-96(C).

130 *Id.* § 25-610-108(F)(1).

131 *Id.* § 25-610-108(F)(1) (“Existing permitted withdrawal amounts shall not be the sole basis for determination of the appropriate withdrawal amounts when a permit is reissued.”).

132 *See* Fact Sheet at 4 (“Viable alternatives to groundwater for cooling and steam generation will be available to Chickahominy Power LLC within the next 7 years.”).

133 *See In re Park*, 436 B.R. 811, 818 (Bankr. W.D. Va. 2010) (“[U]nusual circumstances cannot solely be facts that are common to Chapter 11 cases generally.”) (quoting *In re Sydnor*, 431 B.R. 584, 590 (D. Md. 2010)).

134 *See* Fact Sheet at 3.

135 *Cf.* Virginia Code § 62.1-267(A); 9 VAC § 25-610-170(A).

Although not initially listed among the facts the Department believes justify a special exception,<sup>136</sup> the Department later points to two additional “benefits” of issuing a special exception:

- (4) The more bizarre of the two is the Department’s suggestion that awarding Chickahominy a special exception “will provide a long-term benefit to the Potomac Aquifer by limiting in duration and amount the groundwater withdrawn.”<sup>137</sup> Describing the “allocat[ion of] the last remaining increment of [its] groundwater supply”<sup>138</sup> as a “benefit to the Potomac Aquifer” is akin to saying a shopkeeper “benefits” when a racketeer extracts an “insurance premium” from him: just as the payment of protection money is a benefit only compared to a violent alternative, a seven-year withdrawal of groundwater is a “benefit to the Potomac Aquifer” only in comparison to a longer, fifteen-year draw. As discussed above, the Board has authority to issue a groundwater permit with a term of less than fifteen years.<sup>139</sup> A fifteen-year permit is therefore not the only alternative to a seven-year special exception. Nor, in fact, is a permit of *any* length. Nothing in the Act or the Board’s regulations *entitles* Chickahominy to withdraw groundwater for a non-human-consumption-use from an aquifer “currently exhibit[ing] declining water levels within a multi-county area”—particularly where, as the Department concludes is the case here, it does not qualify for a standard withdrawal permit under Section 62.1-266.<sup>140</sup> When the Act’s permitting standards are not met, the default is simply to *not* allocate groundwater by *either* regulatory mechanism.<sup>141</sup> While declining to authorize a withdrawal is still not, strictly speaking, a “benefit” to the aquifer, it is significantly more beneficial to the health of the aquifer than a seven-year allocation.
- (5) The Department also claims that Chickahominy “will provide an important public benefit by providing cleaner electricity to consumers in the short term, while using air-cooling technology that utilizes less water than traditional evaporative cooling.”<sup>142</sup> The latter of these two considerations—that Chickahominy plans to use less water than it originally

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136 See Fact Sheet at 3 (“The use of a Special Exception is justified because the proposed beneficial use is not for human consumption, the requested groundwater withdrawal is within an area that has incurred an overall decline in the Potomac Aquifer, and viable alternative water sources will be available within 7 years of Special Exception issuance.”).

137 *Id.* at 4.

138 See Exhibit 30, *supra* note 103, at 3.

139 See *supra* notes 125–132 and accompanying text.

140 Fact Sheet at 3 (“DEQ does not believe the issuance of a typical groundwater withdrawal permit is consistent with the Groundwater Management Act.”).

141 9 VAC § 25-610-340(A) (“The director shall make a decision to tentatively deny the permit or special exception requested if the requirements of this chapter are not met.”).

142 Fact Sheet at 4.

planned—suffers from the same fallacy as the Department’s claim that a seven-year special exception will “benefit” the aquifer by limiting the duration of a withdrawal. In both cases, the Department is defining “benefit” to mean merely a “lesser harm”—and an altogether avoidable one at that.<sup>143</sup> In any case, using the minimum amount of water necessary to operate its plant is a *requirement* of a groundwater permit<sup>144</sup>—not a reason why requiring one is contrary to the Act.

The second claim—that Chickahominy will “provid[e] cleaner electricity to consumers in the short term”<sup>145</sup>—is undocumented, irrelevant, and, ultimately, beyond the proper scope of the Board’s purview. Neither the Department nor Chickahominy explains how foregoing air quality improvements *somewhere* in a thirteen-state wholesale energy market is “contrary to the intended purpose of the Act.” The General Assembly does not address air quality concerns at all in the Act. Even assuming for the sake of argument that the only way to realize Chickahominy’s anticipated air quality benefits is to approve a withdrawal for which it is not qualified,<sup>146</sup> that would mean only that the Act’s permit requirement is in tension with some *other*, air-related statute. But a special exception requires an “unusual situation” in which prohibiting the project from going forward would be contrary to the intent of *this* statute. And neither the Board nor the Department has the authority to unilaterally decide that potential air quality improvements in South Side Chicago or the Ohio River Valley are “important enough” to trump the local, groundwater-based concerns the General Assembly saw fit to address in the Act.

Nor is the Board institutionally equipped to make highly speculative findings about the impact a groundwater user will have on other media or on dynamic, wholesale energy markets. It may be appropriate for the Board to consider *groundwater*-related benefits in issuing special exceptions, as it has in the past.<sup>147</sup> In that circumstance, the Board would be making its decision based on the “intended purpose of the Act,” as the statute requires,<sup>148</sup> and would be operating comfortably within its expertise on water resources.<sup>149</sup>

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143 See *supra* notes 140–141 and accompanying text.

144 9 VAC § 25-610-110(D)(3)(d) (requiring an “applicant demonstrate[ ] that the amount of groundwater withdrawal requested is the smallest amount of withdrawal necessary to support the proposed beneficial use”); *id.* § 25-610-100(B)(2) (requiring industrial users’ water conservation and management plan “require use of water-saving equipment and processes for all water users including technological, procedural, or programmatic improvements of the facilities and processes to decrease the amount of water withdrawn”).

145 Fact Sheet at 4.

146 As discussed at length below, a groundwater permit is not even the only way for the Chickahominy facility to go forward, let alone to bring about the air quality improvements it touts. See Comment Nos. 3–5, *infra*.

147 See *supra* note 118 and accompanying text.

148 Virginia Code § 62.1-267(A).

But nothing in the Act suggests the General Assembly envisioned the Board would be called upon to, first, investigate the effects of a new power plant on the dispatch order of an interstate, wholesale energy market; second, determine whether and how those effects would improve air quality somewhere within the thirteen-state marketplace; and finally, decide whether the air quality improvements at that location would be “beneficial enough” to justify both an increase in localized air emissions in Charles City County and the allocation of its final unit of available groundwater. That is a truly expansive vision of Board authority, and one that extends well beyond its statutory expertise.<sup>150</sup>

The Board does not need to test the boundaries of its authority in this case, however, because the Department’s claim fails on its own terms. As explained in greater detail below, the use case for Chickahominy’s plant is highly questionable.<sup>151</sup> No one but the project’s own proponents has determined there is a need for its output, and there is nothing in the permitting record to support that conclusion. Moreover, even if there *is* a need for Chickahominy’s output, there is no indication it will be a need by *consumers*—let alone *Virginia* consumers.<sup>152</sup> While there is no telling exactly where Chickahominy’s electrons will end up, we know with certainty that the plant will not be directly powering homes and businesses in the Commonwealth. By law, Virginia consumers must receive electric service from a regulated utility.<sup>153</sup>

And despite the claim in Chickahominy’s Water Conservation and Management Plan,<sup>154</sup> there is no evidence that the facility will displace more egregious polluters. The order in which electricity generation is dispatched is not based on environmental impact.<sup>155</sup>

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149 *See id.* § 62.1-44.9(A) (requiring that the Board’s members, “by their education, training, or experience, be knowledgeable of water quality control and regulation”).

150 *Id.*

151 *See generally* Comment No. 8, *infra*.

152 *See Consumer*, BLACK’S LAW DICTIONARY (11th ed. 2019) (defining “consumer” as “[s]omeone who buys goods or services for personal, family, or household use”).

153 *See* Virginia Code § 56-265.3.

154 Chickahominy Power, *Water Conservation & Management Plan* at 1-1 (Revised May 9, 2019).

155 The National Association of Clean Air Agencies (of which the Department is a member) explains that dispatch order reflects the “emissions that result from the dispatch of any particular [generator] only . . . to the extent that there is a variable regulatory compliance cost associated with emissions.” National Association of Clean Air Agencies, *Implementing EPA’s Clean Power Plan: A Menu of Options* at 21-2 – 21-3 (May 2015), available at <https://bit.ly/2UI85NS> and enclosed as Exhibit 33 to these comments. Although so-called “environmental dispatch” would be an alternative to the prevailing economic dispatch model, “[u]nder the current regime of federal and state energy policies, [it] may not be feasible.” *Id.* at 21-3 – 21-4.

Determining dispatch order “is at best a complex process,”<sup>156</sup> and it hinges on a host of economic, technological, regulatory, contractual, and meteorological variables.<sup>157</sup> Even if the Board decided it was proper to take it upon itself to investigate whether Chickahominy will in fact edge out a dirtier facility in the generation stack, there is absolutely nothing—let alone substantial evidence—in the permitting record that would allow it to do so.<sup>158</sup>

If the Board were to interpret the “unusual situation” requirement in Section 62.1-267 so broadly as to encompass the “facts” and considerations above, it would invite serious doubts about the constitutionality of the Act’s special exception provision. The Supreme Court of Virginia has consistently held that “delegations of legislative power are valid only if they establish specific policies and fix definite standards to guide the official, agency, or board in the exercise of the power. Delegations [that] lack such policies and standards are unconstitutional and void.”<sup>159</sup> In authorizing the Board to issue special exceptions, Section 62.1-267 of the Act places only one restriction on that authority: that it be exercised only in the “unusual situation in which requiring

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156 United States Department of Energy, *The Value of Economic Dispatch: A Report to Congress Pursuant to Section 1234 of the Energy Policy Act of 2005* at 7 (November 2005), available at <https://bit.ly/2w8dN1b> and enclosed as Exhibit 34 to these comments.

157 *Id.* at 2 (“[E]conomic dispatch practices must take into account several factors, including: the continuous variations in load and generators’ inability to respond instantaneously; the need to maintain reserves and plan for contingencies in order to maintain reliability; and the scheduling requirements imposed by environmental laws, hydrological conditions, and fuel limitations.”); see also United States Environmental Protection Agency, *Roadmap for Incorporating Energy Efficiency/Renewable Energy Policies & Programs into State & Tribal Implementation Plans, Appendix B: Overview of U.S. Electric System* at B-9 (July 2012), available at <https://bit.ly/2SEK9Iu> and enclosed as Exhibit 35 to these comments (explaining that “actual unit dispatch often looks very different from the ideal” of economic dispatch due to transmission constraints, variations in ramping time, and the grouping of generators into bidding blocks).

158 See *Crutchfield v. State Water Control Board*, 45 Va. App. 546, 553 (2005) (holding that Board’s factual findings must be supported by “substantial evidence” that “a reasonable mind might accept as adequate to support a conclusion”); see also *Sprint Spectrum v. Willoth*, 176 F.3d 630, 646 (2d Cir. 1999) (defining “substantial evidence as “the kind of evidence on which responsible persons are accustomed to rely in serious affairs”).

159 *Ames v. Town of Painter*, 239 Va. 343, 349 (1990); see also *Volkswagen of America v. Smit*, 279 Va. 327, 339–40 (2010) (“A statute, ordinance, or regulation which delegates discretionary authority to an administrative officer to determine its application does not satisfy due process if it lacks standards which are sufficiently clear to guide the officer, and inform those subject to his jurisdiction, of how that discretion is to be exercised.”); see also *at id.* (recognizing that issuance of special exceptions regulating land use is a legislative function) (citing *Arlington County Board v. Bratic*, 237 Va. 221, 227 (1989)).

the user to obtain a ground water withdrawal permit would be contrary to the intended purpose of the Act.”<sup>160</sup> Although the statute appears to refer to the statement of purpose in Section 62.1-254 of the Act—to institute the “management and control of ground water resources” in order to “conserve, protect and beneficially utilize th[ose resources] and ensure the public welfare, safety and health”<sup>161</sup>—that provision falls well short of “establish[ing] specific policies[,] fix[ing] definite standards,”<sup>162</sup> or “prescrib[ing] a clear-cut principle to which [the Board] must conform” in exercising its discretion.<sup>163</sup> Rather, the law requires that the Assembly *both* “declare the policy of the law *and* prescribe and fix the legal principles which are to control” the exercise of permitting authority.<sup>164</sup> While Section 62.1-254 satisfies the first part of that equation, neither it nor Section 62.1-267 satisfies the second.

The fact that Section 62.1-267 enumerates certain criteria that “the Board *may* consider”<sup>165</sup> in issuing a special exception does not render the statute constitutional. In determining whether an enactment is susceptible to unconstitutionally arbitrary or inconsistent enforcement, the courts “attach significance to the use of the word ‘may’ . . . rather than ‘shall’” in the statutory text,<sup>166</sup> because the law must be “tested not by what has been done under it, but by what may, by its authority, be done.”<sup>167</sup> There is no indication that the General Assembly employed the word “may” in Section 62.1-267 in anything but its usual, permissive sense.<sup>168</sup> As such, Section

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160 Virginia Code § 62.1-267(A).

161 *Id.* § 62.1-254.

162 *Cf. Ames*, 239 Va. at 349.

163 *Cf. National Maritime Union of America AFL-CIO v. City of Norfolk*, 202 Va. 672, 682 (1961).

164 *Chapel v. Commonwealth*, 197 Va. 406, 411 (1955) (emphasis added).

165 Virginia Code § 62.1-267(B) (emphasis added).

166 *Byrum v. Orange County Board of Supervisors*, 217 Va. 37, 41 (1976). Note that, in upholding the validity of an ordinance that stated a local legislative body “may” issue conditional use permits, the *Byrum* Court indicated that its ruling would not be the same “[h]ad the [legislative body] delegated to an administrator or an administrative agency the power to issue or to deny conditional use permits.” *Id.* at 42. Were that the case, the Court explained, “the law would have required adequate guidelines and standards,” as a “determination of the right of an individual under the ordinance cannot be left to the will or unregulated discretion of subordinate officers or boards.” *Id.* (emphasis added) (citing *Andrews*, 200 Va. at 639).

167 *Assaid v. City of Roanoke*, 179 Va. 47, 51 (1942).

168 *See Hanover County Board of Supervisors v. Weems*, 194 Va. 10, 15 (1952) (“Unless it is manifest that the purpose of the legislature was to use the word ‘may’ in the sense of ‘shall’ or ‘must’ then ‘may’ should be given its ordinary meaning—permission, importing discretion.”) (quoting *Masters v. Hart*, 189 Va. 969, 979 (1949)); *Price v. Commonwealth*, 209 Va. 383, 387 (1968) (“The word ‘may’ is permissive.”).

62.1-254's broad statement of purpose is the only principle controlling the Board's discretion. The Supreme Court of Virginia has held, however, that the "General Assembly cannot delegate its legislative power accompanied only by such a broad statement of general policy."<sup>169</sup>

Of course, the case for Section 62.1-267's constitutionality is much stronger if the Board interprets its special exception authority narrowly, as it has in the past,<sup>170</sup> and with a particular emphasis on the General Assembly's intent to restrict that authority to truly "unusual situation[s] in which requiring the user to obtain a ground water withdrawal permit would be contrary to the intended purpose of the Act."<sup>171</sup> No reasonable interpretation of the statute suggests the *requirement* that Chickahominy obtain a permit—just as all other groundwater users are required to do—is at all contrary to the Act's manifest intent to "manage and control" groundwater resources so the public can "conserve, protect and beneficially utilize" those resources<sup>172</sup>—primarily for human consumption "over all other[ ]" uses,<sup>173</sup> and secondarily for uses, like industrial ones, that do not directly "support human survival and health."<sup>174</sup> In sum, while Chickahominy's request may present the Board with a *specific* situation, it does not present an *unusual* one—let alone one in which requiring a permit would be contrary to the Act's purpose. Awarding a special exception under the circumstances at hand would, therefore, constitute an abuse of the Board's discretion.

**Comment No. 3: Chickahominy and the Department have failed to demonstrate that the New Kent County alternative is impracticable.**

The Board may issue a withdrawal permit only after an applicant demonstrates that "no other sources of water supply, including reclaimed water, are practicable;"<sup>175</sup> that "the amount of groundwater withdrawal requested is the smallest amount necessary to support the proposed

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169 *Bell v. Dorey Electric*, 248 Va. 378, 381 (1994) (citing *Andrews v. Loudoun County Board of Supervisors*, 200 Va. 637, 641 (1959)).

170 *See supra* notes 112–118 and accompanying text.

171 *See Tanner v. City of Virginia Beach*, 277 Va. 432, 438–39 (2009) (holding that, because courts must "resolve any reasonable doubt concerning the constitutionality of a law in favor of its validity," courts must honor any reasonable construction of a statute that "render[s] its terms definite and sufficient") (citing *In re Phillips*, 265 Va. 81, 85–86 (2003)); *Finn v. Virginia Retirement System*, 259 Va. 144, 153 (2000); *see also Layne v. Crist Electrical Contractor*, 62 Va. App. 632, 642 (2013) ("The Legislature is presumed to know what it intends to do and *can do*.")) (quoting *Hitt Construction v. Pratt*, 53 Va. App. 422, 430 (2009)) (emphasis added).

172 Virginia Code § 62.1-254.

173 *Id.* § 62.1-263.

174 *Cf.* 9 VAC § 25-610-10 (definition of "human consumption").

175 *Id.* § 25-610-110(D)(3)(a).



beneficial use;<sup>176</sup> and that “the amount is representative of the amount necessary to support similar beneficial uses when adequate conservation measures are employed.”<sup>177</sup> To demonstrate that no other alternatives are “available and capable of being done,” an applicant must submit an alternatives analysis demonstrating that all “[a]lternative sources of supply other than groundwater, including surface water and water reuse, were considered for use in the proposed activity”<sup>178</sup> and that the applicant has exhausted all “[p]racticable alternatives . . . for the proposed activity.”<sup>179</sup> Without exception, all “[m]easures that would avoid or result in less adverse impact to high quality groundwater *shall* be considered to the maximum extent practicable.”<sup>180</sup>

Per the Board’s permitting regulations, alternative sources of water supply are “practicable” when they are “available and capable of being done after taking into consideration cost, existing technology, and logistics in light of overall project purposes.”<sup>181</sup> That definition is lifted verbatim from EPA regulations implementing the federal Clean Water Act.<sup>182</sup> Under Section 404 of that statute, the Army Corps of Engineers may issue permits for the discharge of dredged or fill material into waterbodies in accordance with regulations developed by the EPA.<sup>183</sup> Those regulations prohibit the Corps from permitting any project for which there is a “practicable alternative to the proposed discharge which would have less adverse impact.”<sup>184</sup> Like the Board’s regulations, the federal regulations define “practicable” alternatives as those “available and capable of being done, after taking into consideration cost, existing technology, and logistics in light of overall project purposes.”<sup>185</sup>

Because the regulatory definitions are identical, federal decisions evaluating the practicability of alternatives under the Clean Water Act are “peculiarly applicable” to practicability

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176 *Id.* § 25-610-110(D)(3)(d).

177 *Id.*

178 *Id.* § 25-610-102(C)(3).

179 *Id.* § 25-610-102(C)(4).

180 *Id.* (emphasis added). The Department recently emphasized the importance of this requirement its 2019 report to the General Assembly, explaining that “applicants seeking a groundwater withdrawal from confined coastal plain aquifers must justify their need for high-quality groundwater over other available alternative sources such as surface water, reuse, or lower-quality groundwater from other aquifers, including the surficial aquifer.” 2019 Water Resources Report, *supra* note 81, at vi.

181 9 VAC § 25-610-10 (definition of “practicable”).

182 33 U.S.C. §§ 1251–1388.

183 *Id.* § 1344(a)–(b).

184 40 C.F.R. § 230.10(a).

185 *Id.* § 230.3(f).

determinations under the Board's permitting regulations.<sup>186</sup> Those decisions recognize that the relevant "test is not whether a proposed project is 'better' than an alternative . . . because it would cost less and have less impact on existing and future development," or because it "would make a more desirable project."<sup>187</sup> Rather, the test requires applicants demonstrate that alternatives are actually unavailable or incapable of being done,<sup>188</sup> and the law does "not condone blind acceptance" of the applicant's conclusions.<sup>189</sup>

Importantly, an agency must determine what was "available and capable of being done" at the time the applicant entered into the market—the "time the applicant is searching for a site."<sup>190</sup> The federal Court of Appeals for the Second Circuit has explained why "a common-sense reading" of the practicable alternatives requirement "can lead only to the use of th[is] market entry approach."<sup>191</sup> The underlying purpose of the requirement is to avoid unnecessary impacts to a valued resource in the first place.<sup>192</sup> The market entry approach ensures there is an incentive for developers to avoid siting projects on land where they would threaten that resource, choosing

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186 *Cohen v. Cohen's Department Store*, 171 Va. 106, 110 (1938); see also *Hoffer Brothers v. Smith*, 148 Va. 220, 227 (1927) (holding that, when a Virginia statute is "pract[ic]ally speaking, a copy of" a statute of another jurisdiction, "the judicial construction placed upon the latter act in that [jurisdiction] will be considered to have been adopted"); *Department of Labor & Industry v. Westmoreland Coal*, 233 Va. 97, 104 (1987) (holding that this doctrine also applies to language derived from federal regulations).

187 *Utahns for Better Transportation v. Department of Transportation*, 305 F.3d 1152, 1186, 1188 (10th Cir. 2002).

188 As discussed in further detail below, Chickahominy has advised regulators that the viability of its project is tenuous. See *infra* notes 327–333 and accompanying text. Practicability determinations, however, are not based on what is feasible given the specific "applicant's financial standing, or investment, or market share." See *Guidelines for Specification of Disposal Sites for Dredged or Fill Material*, 45 Federal Register 85336, 85339 (December 24, 1980) ("[C]onsideration of the applicant's financial standing, or investment, or market share . . . is not material" to a practicability analysis). Stated otherwise, the analysis does not give cash-strapped applicants an advantage over well-funded applicants. See *Sierra Club v. Van Antwerp*, 661 F.3d 1147, 1151 (D.C. Cir. 2011) (*Antwerp II*) (holding that consideration of "applicant-specific factors . . . would create the odd possibility that an alternative practicable for one applicant would be impracticable for another"). Or, put another way, an alternative is not impracticable merely because Chickahominy has trouble attracting the capital for it.

189 *Sierra Club v. Van Antwerp*, 709 F. Supp. 2d 1254, 1267 (S.D. Fla. 2009) (*Antwerp I*) (quoting *Friends of the Earth v. Hintz*, 800 F.2d 822, 836 (9th Cir. 1986)) (internal alterations omitted).

190 *Bersani v. Environmental Protection Agency*, 850 F.2d 36, 41, 43–44 (2d Cir. 1988).

191 *Id.* at 44.

192 *Id.*

instead an alternative site that does not entail harm to the resource.<sup>193</sup> Evaluating alternatives at a point in time *after* a developer has already chosen a site would “thwart this purpose:”

[I]t would remove the incentive for a developer to search for an alternative site at the time such an incentive is needed, *i.e.*, at the time it is making the decision to select a particular site. If the practicable alternatives analysis were applied to the time of the application for a permit, the developer would have little incentive to search for alternatives, especially if it were confident that alternatives soon would disappear.<sup>194</sup>

Furthermore, the federal courts recognize that the “level of documentation” for a practicability analysis “should reflect the significance” of the proposed activity relative to the purpose of the permitting scheme.<sup>195</sup> That means that the more significant a project’s effect on the interests protected by the statute, the more demanding the standard for documenting the absence of a practicable alternative.<sup>196</sup>

Chickahominy’s request is, to be sure, significant in its implications. Without recounting the dire state of the aquifer,<sup>197</sup> it is enough to cite the Department’s own concerns that issuing a permit in this case would “allocate the last remaining increment of available groundwater supply within a multi-county area . . . to a use other than human consumption in a region with ongoing resource challenges.”<sup>198</sup> Moreover, the Department has acknowledged that issuing a permit would “potentially undermine[ ] successful efforts to reduce withdrawal limits by existing permittees.”<sup>199</sup> In light of those realities, the Board should here hold Chickahominy to a high burden of documenting the absence of practicable alternatives to groundwater withdrawal.<sup>200</sup>

The Department recognizes that neighboring New Kent County has an existing permit for groundwater withdrawal near the project with “sufficient capacity to supply Chickahominy Power.”<sup>201</sup> In fact, since at least 2013, Charles City County’s Water Supply Management Plan

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193 *Id.*

194 *Id.*

195 *Hillsdale Environmental Loss Prevention v. Army Corps of Engineers*, 702 F.3d 1156, 1169 (10th Cir. 2012) (quoting 40 C.F.R. § 230.6(b)); *Town of Norfolk v. Army Corps of Engineers*, 968 F.2d 1438, 1447 (1st Cir. 1992) (“[T]he level of review depends on the nature and severity of the project’s impact”).

196 *Hillsdale*, 702 F.3d at 1169.

197 *See generally* Comment No. 1, *supra*.

198 *See* Exhibit 30, *supra* note 103, at 3.

199 *See* Exhibit 29, *supra* note 99, Attachment at 2.

200 *Hillsdale*, 702 F.3d at 1169.

201 Fact Sheet at 7.

has envisioned that “[f]uture water supply for the Industrial areas to include the Roxbury Development Center and the Industrial Reserve may be brought in from outside sources.”<sup>202</sup> Throughout the Department’s permitting review, Chickahominy advised the agency of its ongoing “negotiations with New Kent County . . . to provide water (groundwater) from New Kent’s well system to Chickahominy Power, as a fall back source, in the event Chickahominy Power is unable to obtain a withdrawal permit.”<sup>203</sup>

The Department’s Fact Sheet confirms that those negotiations were ultimately fruitful and that New Kent County and Chickahominy have successfully “negotiated a contract . . . to supply water to the facility.”<sup>204</sup> While acknowledging “several physical and environmental obstacles” to fulfillment of the contract, Chickahominy admits that “they are not insurmountable.”<sup>205</sup> Indeed, despite initially representing to the Department that those obstacles rendered the New Kent alternative “highly unlikely to be achievable,”<sup>206</sup> Chickahominy now admits that its primary concern is the “impact [on] the Power Plant’s development schedule” were it forced to surmount the admittedly surmountable.<sup>207</sup>

The Board, of course, is in the business of protecting groundwater resources, not ensuring developers meet their timeline, and an alternative is not impracticable merely because it does not fit with the developer’s ideal timeline.<sup>208</sup> By all accounts, the Department believes connecting to New Kent County represents “a viable long-term alternative for the power plant.”<sup>209</sup> Yet it appears that New Kent does not represent a *near*-term solution to Chickahominy’s demand only

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202 Charles City County, *Water Supply Management Plan* at 101 (2013), attached as Exhibit 36 to these comments.

203 Letter from Kenneth M. Baybutt, Bowman Consulting Group, to Tony Cario, Department of Environmental Quality at 2 (May 29, 2019), enclosed as Exhibit 37 to these comments.

204 Fact Sheet at 4.

205 Exhibit 37, *supra* note 203, at 2.

206 *See* Chickahominy Groundwater Application, Attachment B at 2.

207 Exhibit 37, *supra* note 203, at 2.

208 *Simmons v. Army Corps of Engineers*, 120 F.3d 664, 669 (7th Cir. 1997) (“An agency cannot restrict its analysis to those ‘alternative means by which a particular applicant can reach *his* goals.’”) (quoting *Van Abbema v. Fornell*, 807 F.2d 633, 638 (7th Cir. 1986)). Note that although *Simmons* addressed the “reasonable alternatives” analysis required under the National Environmental Policy Act, 42 U.S.C. §§ 4321–4347, its holding is equally applicable to the Clean Water Act’s more stringent “practicable alternatives” standard. *See Van Antwerp I*, 709 F. Supp. at 1267 (citing *Simmons* in the context of a Clean Water Act practicable alternatives analysis).

209 Fact Sheet at 7.

because Chickahominy always considered it a Plan B that had “not been fully analyzed” yet.<sup>210</sup> While the Department reports that a potential pipeline route to interconnect with New Kent County is currently “being evaluated to determine the need to secure easements,”<sup>211</sup> it does not explain why this option is only being evaluated *now*. The permitting record therefore cannot support a finding that alternatives were “considered *to the maximum extent practicable*,” as the Board’s regulations require.<sup>212</sup>

It would be inappropriate for the Board to issue a permit—let alone a special exception—merely to bail out an applicant who did not diligently pursue all practicable alternatives *before* applying for a groundwater permit. The relevant inquiry is not whether an alternative would cause delay *now*, after Chickahominy has gone all-in on its preferred course of action. The Board must determine whether the New Kent County alternative would have been practicable *before* Chickahominy sunk time and resources into its current plan. While it is clear that Chickahominy preferred to slow-walk connection with New Kent because (as it advised the Department) it “would rather be able to generate revenue to fund the construction in the next permit term,”<sup>213</sup> an agency cannot allow “the stated preferences of the applicant” to guide the alternatives analysis.<sup>214</sup> Chickahominy has no right to claim the final allocation of groundwater in a multi-county area simply because it prefers to develop an available alternative *after* it begins operations.

Aside from the fact that the delay associated with the New Kent alternative appears to be largely self-inflicted, that delay, taken alone, does not render the New Kent alternative impracticable. There is no indication in the permitting record that Chickahominy’s intent to “replace a number of coal fired generating facilities”<sup>215</sup> will be frustrated if its project schedule is deferred.<sup>216</sup> Indeed, as explained further below, deferring the project further is likely to *improve* the outlook for

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210 See Chickahominy Groundwater Application, Attachment B at 7.

211 Fact Sheet at 7.

212 9 VAC § 25-610-102(C)(4).

213 See Exhibit 38 (May 1, 2019 memorandum documenting April 25, 2019 meeting between Chickahominy and the Department).

214 See *Sierra Club v. Marsh*, 714 F. Supp. 539, 577 (D. Me. 1989) (*Marsh I*), *affirmed* 976 F.2d 763 (2d. Cir. 1992) (*Marsh II*); see also *Sierra Club v. Marsh*, 744 F. Supp. 352, 363 n.18 (D. Me. 1989) (*Marsh III*) (holding that the scope of an alternatives analysis is defined by the reasonableness of the options, “not by whether the applicant prefers . . . a particular alternative”).

215 See Chickahominy Groundwater Application, Attachment A at 1.

216 See, e.g., *Gateway Pipeline*, 55 FERC ¶ 61488, 62686 (June 25, 1991) (rejecting applicant’s “speculative” argument that an alternative was impracticable merely because “the demonstrated need for pipeline capacity” made the prospect of delay for “new engineering, permitting, and environmental studies on the alternative . . . entirely unreasonable”).

Chickahominy's objective of selling electricity into the PJM market.<sup>217</sup> Because Chickahominy has failed to explain how the New Kent alternative would frustrate the overall purpose of its project, the Board cannot find that Chickahominy has met its burden to demonstrate that all practicable alternatives were "considered to the maximum extent possible."<sup>218</sup>

The Club understands that Chickahominy is displeased with the delays it has encountered in attempting to construct the state's largest gas-fired power plant. It has been six months now since Chickahominy refused a request from the Air Pollution Control Board for a 30-day extension of the public comment period on its air quality permit, representing to the agency that any "further extension . . . [wi]ll kill the project."<sup>219</sup> To its credit, no such claim appears in the permitting record here. But even were it otherwise, the Board simply cannot allocate scarce groundwater to an applicant who has failed to demonstrate the impracticability of alternatives.<sup>220</sup> All said, an applicant with a "fall back source"<sup>221</sup> is not an applicant with "an established water supply *need*" for which "*no* other sources of water supply . . . are practicable."<sup>222</sup> Granting a permit or special exemption under these circumstances would therefore be an abuse of the Board's discretion.

**Comment No. 4: Chickahominy and the Department have failed to demonstrate that a surface water alternative is impracticable.**

The General Assembly's Joint Legislative Audit & Review Commission<sup>223</sup> has acknowledged that, unlike with groundwater, Virginia's surface water supply "does not face immediate

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217 See *infra* notes 309–312 and accompanying text.

218 9 VAC § 25-610-102(C)(4).

219 See Virginia State Air Pollution Control Board, Transcript of June 21, 2019 Meeting at 34:18–34:23 (June 21, 2019), enclosed as Exhibit 39 to these comments (hereinafter Air Board Transcript) (comments of John Byrum, counsel for Chickahominy Power).

220 9 VAC § 25-610-110(D)(3)(a).

221 Exhibit 37, *supra* note 203, at 2.

222 9 VAC §§ 25-610-102(B), 25-610-110(D)(3)(a) (emphases added).

223 The Joint Legislative Audit & Review Commission is a legislative agency created by the General Assembly to, among other things "[s]tudy on a continuing basis the operations, practices and duties of state agencies." Virginia Code § 30-58.1(2). In 2015, the General Assembly directed the Commission to review Virginia's water resource management and planning. See Joint Resolution No. 272, *supra* note 88.

challenges.”<sup>224</sup> An applicant for a groundwater permit therefore bears a heavy burden of demonstrating that no practicable surface water alternative exists.<sup>225</sup>

The permitting record here does not sustain that burden. As noted above, C4GT has proposed to supply water to its combined cycle plant by piping surface water from the James River to a parcel less than a mile from the proposed site of the Chickahominy project.<sup>226</sup> The Department issued a VWP Permit to C4GT on September 1, 2017, authorizing the withdrawal of more than 2.7 billion gallons annually from the James River.<sup>227</sup> In issuing that permit, the Department represented that, assuming C4GT complied with its terms and conditions, “there is a reasonable assurance that the activity authorized . . . will protect instream beneficial uses, will not violate applicable water quality standards, and will not cause or contribute to significant impairment of state waters or fish and wildlife resources.”<sup>228</sup> The Department has elsewhere stated that the 2.7 billion gallons C4GT will withdraw is “a relatively small withdrawal compared to the James River flow and the tidal influence,” and thus the “withdrawal is not expected to impact river habitat or salinity levels upstream or downstream.”<sup>229</sup> The State Corporation Commission similarly found that “any adverse environmental impacts” associated with C4GT’s surface water withdrawal can be “reasonably minimized.”<sup>230</sup>

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224 See Joint Legislative Audit & Review Commission, *supra* note 82, at 37.

225 9 VAC § 25-610-102(C)(3)–(4) (requiring permit applicants to demonstrate surface water alternatives were “considered to the maximum extent possible”); see also *supra* notes 195–200 and accompanying text.

226 See *supra* notes 75–77 and accompanying text.

227 See *supra* note 76.

228 See C4GT Fact Sheet, *supra* note 74, at 1.

229 See Exhibit 40 (C4GT Permit Summary).

230 C4GT Final Order, *supra* note 230, at 10. The Commission made a similar finding as to Chickahominy’s original proposal to supply its facility with surface water. See Hearing Examiner’s Report, *supra* note 69, at 9 (describing Chickahominy’s original proposal for “cooling water for the Facility [to] be supplied from the James River” and an on-site well for potable water only); Chickahominy Final Order, *supra* note 69 at 10–11. According to the Commission’s online docket tool, Chickahominy has not filed any formal notice with the Commission of its decision to change the facility’s water supply. Cf. *id.* at 12 (granting a certificate of public convenience and necessity “to construct and operate the Facility *as set forth in this proceeding*”) (emphasis added); 20 VAC § 5-302-20(12)(b) (requiring applicants for a certificate of public convenience and necessity to “identify . . . [r]equired permits for water withdrawals, expected restrictions, the amount of water estimated to be used, the source of such water . . . . and . . . facilities that need to be constructed to provide such waters”).

It appears that the Department considered C4GT's surface water withdrawal permit in weighing Chickahominy's request to withdraw groundwater.<sup>231</sup> Yet Chickahominy and the Department apparently eliminated surface water from the James as an alternative based on Chickahominy's finding that it was "not a cost effective alternative to the proposed on-site groundwater withdrawal system."<sup>232</sup> Even if that statement is true—Chickahominy does not provide any documentation, let alone the equivalent-basis cost analysis required under the Board's regulations<sup>233</sup>—it simply does not meet the legal standard. The Board can issue a groundwater permit only where "no other sources of water supply" are "available and capable of being done."<sup>234</sup> And "although cost is relevant to an assessment of an alternative's 'practicability,'" an agency generally needs to independently examine whether the cost of an alternative is "unreasonably high [and] whether [an applicant] could afford it" given the overall nature of the project.<sup>235</sup> Stated otherwise, "the fact that an alternative might have some unquantified higher operating cost does not mean the alternative is not 'available' or 'capable of being done.'"<sup>236</sup>

Even taking into consideration the treatment requirements, the increased operational complexity, and the potential for impacts to surface waters,<sup>237</sup> C4GT's experience proves that drawing surface water from the James and transporting it to the Roxbury industrial park is "capable of

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231 See C4GT Permit Summary, *supra* note 229.

232 Exhibit 37, *supra* note 203, at 2.

233 9 VAC § 25-610-102(E)(4).

234 *Id.* § 25-610-110(D)(3)(a).

235 *Hough v. Marsh*, 557 F. Supp. 74, 84 (D. Mass. 1982). Note, however, that in considering whether the applicant can afford an alternative, the agency must apply an objective, rather than subjective, standard. The test is whether the alternative is affordable given the nature of the project involved. See *Guidelines for Specification of Disposal Sites for Dredged or Fill Material*, 45 Federal Register 85336, 85339 (December 24, 1980) ("[C]onsideration of the applicant's financial standing, or investment, or market share . . . is not material" to a practicability analysis); *Van Antwerp II*, 661 F.3d at 1151 (holding that consideration of "applicant-specific factors . . . would create the odd possibility that an alternative practicable for one applicant would be impracticable for another").

236 *Delaware Riverkeeper Network v. Army Corps of Engineers*, 869 F.3d 148, 159 (3d Cir. 2017); see also *Friends of the Earth v. Hall*, 693 F. Supp. 904, 947 (W.D. Wash. 1988) (holding that, in practicable alternatives analysis, "significant additional cost can prove determinative, in and of itself, only if the competing alternatives can reasonably be viewed as equivalent with respect to other factors").

237 See Fact Sheet at 6; cf. *Alliance to Save the Mattaponi v. Army Corps of Engineers*, 606 F. Supp. 2d 121, 130 (D.D.C. 2009) (holding that a permitting agency "must do more than give vague explanations about the potential adverse effects of or potential political opposition to other alternatives").



being done” by an entity like Chickahominy.<sup>238</sup> Concomitantly, because the “beneficial use” for Chickahominy and C4GT is the same—generating electricity for sale on the PJM market<sup>239</sup>—C4GT’s experience precludes any finding required under 9 VAC § 25-610-110(D)(3)(d) that “the amount of groundwater withdrawal [Chickahominy] requested is the smallest amount of withdrawal necessary to support the proposed beneficial use” or “representative of the amount necessary to support [a] similar beneficial use[ ].”

The fact that C4GT plans to use wet cooling techniques, while Chickahominy has altered its proposal to instead implement dry cooling, is inapposite. The “beneficial use” Chickahominy proposes cannot be defined so narrowly as to exclude a wet cooling alternative.<sup>240</sup> The fact that Chickahominy originally proposed a wet cooling system demonstrates that a reversion to wet cooling is soundly within the scope of its purpose.<sup>241</sup> To the extent the Board is legitimately interested in air quality impacts as a factor in the groundwater permitting process,<sup>242</sup> it should be aware that reversion to wet cooling would almost certainly mitigate localized emissions from the plant. After studying the environmental trade-offs of wet and dry cooling systems, the California Energy Commission reported that, “to meet a given total system load, more fuel must be burned if dry cooling is used—with a corresponding increase in emissions of NO<sub>x</sub>, particulate matter, SO<sub>2</sub> and CO<sub>2</sub>.”<sup>243</sup>

The Department’s recommendation here is not only inconsistent with its prior approval of C4GT’s surface water withdrawal permit, but also with its finding in support of that permit that “[e]xisting issues with groundwater depletion in the regional aquifers of the Virginia coastal plain” effectively precluded groundwater as an alternative to surface water withdrawal.<sup>244</sup> It is entirely appropriate for an agency evaluating a pending permit request to consider its prior

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238 9 VAC § 25-610-10 (definition of “practicable”).

239 See Chickahominy Final Order, *supra* note 69 at 3 (“C[hickahominy] would operate [its] Facility as an exempt wholesale generator supplying wholesale power to the PJM Interconnection”); C4GT Fact Sheet, *supra* note 77, at 3 (“The [C4GT] project will operate as an independent power producer and deliver the electricity generated to PJM”).

240 See *Sylvester v. Army Corps of Engineers*, 822 F.2d 407, 409 (9th Cir. 1989) (“[A]n applicant cannot define a project in order to preclude the existence of any alternative sites and thus make what is practicable appear impracticable.”).

241 See Chickahominy Groundwater Application, Attachment A at 2.

242 See *supra* notes 145–150 and accompanying text.

243 California Energy Commission, *Comparison of Alternate Cooling Technologies for California Power Plants* at 6-7 (February 2002), available at <https://bit.ly/37c2jrn> and enclosed as Exhibit 41 to these comments.

244 See C4GT Fact Sheet, *supra* note 74, at 4.

permit actions.<sup>245</sup> The Department, however, has provided no explanation for its change in position—even as its most recent water resources report suggests the threat of groundwater depletion has only *worsened* since it reviewed C4GT’s VWP permit request.<sup>246</sup> Here again, issuing a groundwater permit under these circumstances would represent an “unexplained change from prior decisions,” which could “render [the Board’s] decision arbitrary and capricious” under Virginia law.<sup>247</sup>

**Comment No. 5: Chickahominy and the Department improperly limit their alternatives analysis to alternative water sources for the present Chickahominy site, failing to consider practicable, alternative sites for the facility.**

As discussed above, the Board’s practicable alternatives analysis is designed to mirror the analysis applied by federal agencies under Section 404 of the Clean Water Act.<sup>248</sup> Courts reviewing an agency’s alternatives analysis are clear that an “alternative is not deemed impracticable simply because the applicant does not own an alternative area for the project, if such an alternative area can reasonably be obtained by the applicant.”<sup>249</sup> As noted above, the relevant time at which an “alternative area can reasonably be obtained” is when an applicant enters the market—not after the applicant has sunk significant time and resources into the project.<sup>250</sup> Properly understood, the practicable alternatives analysis must consider the prospect that off-site alternatives capable of meeting project goals were available when the applicant entered the market.<sup>251</sup>

Even assuming, for the sake of argument, that groundwater withdrawal is the only practicable way to supply water to the proposed site of the Chickahominy plant, the permitting record does not demonstrate that the overall purpose of Chickahominy’s project—generation of electricity

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245 See, e.g., *Northwest Environmental Defense Center v. Wood*, 947 F. Supp. 1371, 1378–79 (D. Ore. 1996).

246 See 2019 Water Resources Report, *supra* note 81, at vii.

247 See *NRV Real Estate*, 51 Va. App. at 532 (citing *National Cable*, 545 U.S. at 981).

248 See *supra* notes 182–195 and accompanying text.

249 See *Slagle v. United States ex rel. Baldwin*, 809 F. Supp. 704, 713 (D. Minn. 1992) (citing 40 C.F.R. § 230.10(a)(2)).

250 See *supra* notes 190–194 and accompanying text.

251 See *Precon Development v. Army Corps of Engineers*, 658 F. Supp. 2d 752, 768 (E.D. Va. 2009), *reversed on other grounds*, 633 F.3d 278 (4th Cir. 2011) (upholding denial of permit based on applicant’s failure to prove that “offsite alternatives” to a proposed housing development were not “available and practicable”); see also *Smereka v. Glass*, 945 F.2d 405 (6th Cir. 1991) (per curiam) (affirming Corps’s finding that “practicable alternatives include selection of another site for home construction that is not a wetland or special aquatic site”).

for sale on the PJM market<sup>252</sup>—cannot be accomplished at other sites with ready access to surface water or more abundant groundwater. Unlike residents and municipalities in the Eastern Virginia Groundwater Management Area, Chickahominy chose to locate in an area where groundwater is scarce. Chickahominy has taken no steps to demonstrate its parcel at the Roxbury industrial park is the *only* location across PJM’s thirteen-state transmission system where generation of electricity for sale in the PJM market is feasible.<sup>253</sup> Because nothing in the record suggests that the Department or Chickahominy considered alternative sites capable of supporting Chickahominy’s overall project objectives without burdening the already-strained aquifers in the eastern coastal plain, the alternatives analysis is insufficient.

**Comment No. 6: The Department has failed to conduct an environmental justice analysis, as required by Virginia law.**

The term “environmental justice” (or EJ) refers to the “fair treatment and meaningful involvement of all people regardless of race, color, faith, national origin, or income, in the development, implementation, and enforcement of environmental laws, regulations, and policies.”<sup>254</sup> The federal Fourth Circuit Court of Appeals recently explained that, while “the term ‘environmental justice’ is of fairly recent vintage, the concept is not.”<sup>255</sup> It is reflected, for example, in Justice Douglas’s observation nearly fifty years ago that it “often happens with

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252 See *supra* note 239 and accompanying text.

253 The commenters recognize that proximity to Dominion’s Chickahominy Substation, the associated 230- and 500-kV transmission circuits, and Virginia Natural Gas’s transmission pipeline are all benefits of operating in the Roxbury industrial park. See *Application of Chickahominy Power*, Virginia Corporation Commission Case No. PUR-2017-00033, Application for Certificate of Public Convenience and Necessity at ¶ 5 (March 13, 2017), available at <https://bit.ly/2H6aWbt> and enclosed as Exhibit 42 to these comments (hereinafter Chickahominy CPCN Application). However, there may be other sites with access to similar—even preferable—amenities. It is Chickahominy’s burden to show that it canvassed for those alternatives. To be sure, it may be that every alternative uncovered by a thorough search would have proved technically, economically, or logistically infeasible; but the Board “and, more important, the public cannot know what the facts are until the” applicant places that analysis before them. See *Simmons v. Army Corps of Engineers*, 120 F.3d 664, 669 (7th Cir. 1997).

254 Virginia Executive Order No. 29 at 1 (January 22, 2019), available at <https://bit.ly/31rgHJU> and enclosed as Exhibit 43 to these comments.

255 *Friends of Buckingham v. State Air Pollution Control Board*, 947 F.3d 68, 87 (4th Cir. 2020) (quoting *Jersey Heights Neighborhood Association v. Glendening*, 174 F.3d 180, 195 (4th Cir. 1999) (King, J., concurring)).

interstate highways [that] the route selected [i]s through the poor area of town, not through the area where the politically powerful people live.”<sup>256</sup>

Unfortunately, the same principle holds in the protection and allocation of groundwater. Scholarship confirms “it is politically marginalized populations around the world who overwhelmingly fall victim to . . . lack of sufficient access to safe, affordable drinking water.”<sup>257</sup> Groundwater depletion, in particular, “disproportionately impacts poor and rural communities, since the poorer landowners have fewer means to dig deeper wells as water tables fall.”<sup>258</sup> And “overcoming [EJ] problems is no easier for groundwater management systems than for other aspects of social interaction.”<sup>259</sup>

In Virginia, however, EJ is no longer an abstract concept: state law requires that certain agencies (including, as explained below, the Board) account for EJ in their decisionmaking. The Commonwealth Energy Policy, set forth in Title 67 of the Virginia Code, “[e]nsure[s] that development of new, or expansion of existing, energy resources or facilities does not have a disproportionate adverse impact on economically disadvantaged or minority communities.”<sup>260</sup> Accordingly, the Commonwealth Energy Policy lists among Virginia’s “energy objectives” the development of “energy resources and facilities in a manner that does not impose a disproportionate adverse impact on economically disadvantaged or minority communities.”<sup>261</sup> Virginia Code § 67-102(C) then requires that “[a]ll agencies and political subdivisions of the Commonwealth, in taking discretionary action with regard to energy issues, shall recognize the elements of the Commonwealth Energy Policy and where appropriate, shall act in a manner consistent therewith.”<sup>262</sup>

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256 *Friends of Buckingham*, 947 F.3d at 87 (quoting *Triangle Improvement Council v. Ritchie*, 402 U.S. 497, 502 (1971) (Douglas, J., dissenting)).

257 Rose Francis & Laurel Firestone, *Implementing the Human Right to Water in California’s Central Valley: Building a Democratic Voice Through Community Engagement in Water Policy Decisionmaking*, 47 WILLAMETTE LAW REVIEW 495, 502 (2011), available at <https://bit.ly/2RYtLDH>.

258 Lubrano & Moore, *supra* note 95, at 7 (citing Brett Walton, *California’s Dogged Drought Cutting Off Water Supplies to State’s Poor*, CIRCLE OF BLUE (August 26, 2014), available at <https://bit.ly/2NVXBq3>; Kurt Stephenson, *Investigation of the Economic Impacts of Coastal Plain Aquifer Depletion & Actions that May be Needed to Maintain Long-Term Availability & Productivity* at 5 (August 2014), available at <https://bit.ly/2TQbdH4>).

259 Joseph W. Dellapenna, *Primer on Groundwater Law*, 49 IDAHO LAW REVIEW 265, 320 (201), available at <https://bit.ly/3831xgq>.

260 Virginia Code § 67-102(A)(11).

261 *Id.* § 67-101(12).

262 *Id.* § 67-102(C).

The Department has acknowledged—and the Fourth Circuit accepted—that the Commonwealth Energy Policy requires an environmental citizen board to “consider the potential for disproportionate impacts to minority and low income communities” before it exercises discretionary authority.<sup>263</sup> Thus, in *Friends of Buckingham v. State Air Pollution Control Board*, the Department acknowledged that an EJ analysis is required before a citizen board may issue a permit under a statutory scheme that requires the board consider the “character and degree of injury to health” and the “suitability of the activity to the area.”<sup>264</sup> And to be sure, the EJ analysis cannot be treated as “merely a box to be checked.”<sup>265</sup> *Friends of Buckingham* holds that, where a board’s EJ review is insufficient, issuing a permit is “arbitrary and capricious[,] unsupported by substantial evidence,” and ultimately subject to vacatur.<sup>266</sup>

Like the permitting scheme in *Friends of Buckingham*, the Ground Water Management Act imbues the Board with significant discretion in deciding whether—and under what conditions—it will issue a withdrawal permit.<sup>267</sup> The Board’s regulations require it to consider the “nature of the use of the proposed withdrawal,”<sup>268</sup> the “public benefit provided by the proposed withdrawal,”<sup>269</sup> any “[p]opulation and water demand projections during the terms of the proposed permit,”<sup>270</sup> and “[o]ther factors that the board deems appropriate.”<sup>271</sup> By virtue of Virginia Code § 67-102(C), then, the Board must “recognize the elements of the Commonwealth Energy Policy”—including, as relevant here, the potential for “disproportionate adverse impact

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263 *Friends of Buckingham*, 947 F.3d at 87 (quoting brief filed by the Department in that case).

264 *Id.* (quoting Virginia Code § 10.1-1307(E)).

265 *Id.* at 92.

266 *Id.* at 87–93.

267 As discussed in greater detail above, the Board must evaluate Chickahominy’s request according to the standards applicable to groundwater withdrawal permits, not special exceptions. We note, however, that the Board’s discretion is even *greater* in the context of a special exception. Other than the limitation in Section 62.1-267(A) restricting special exceptions only to “unusual situation[s] in which requiring the user to obtain a ground water withdrawal permit would be contrary to the intended purpose of the Act,” the Board’s discretion in issuing special exceptions is limited only by 9 VAC § 25-610-200 (prohibiting “special exceptions for the normal operations of public water supplies), § 25-610-220 (prohibiting renewal of special exceptions), and § 25-610-210 (requiring special exceptions include certain conditions applicable to groundwater permits).

268 9 VAC § 25-610-110(D)(4)(a).

269 *Id.* § 25-610-110(D)(4)(b).

270 *Id.* § 25-610-110(D)(4)(h).

271 *Id.* § 25-610-110(D)(4)(j).

on economically disadvantaged or minority communities”<sup>272</sup>—and “where appropriate, . . . act in a manner consistent [ ]with” the avoidance of those impacts.<sup>273</sup>

The permitting record here is bereft of *any* attempt to comply with the EJ requirements imposed by Virginia law. This is true even though the Department previously conducted a preliminary screening of EJ considerations in the vicinity of the proposed plant: In evaluating Chickahominy’s pre-construction air quality permit, the Department consulted the Environmental Protection Agency’s EJSCREEN tool.<sup>274</sup> The results of that screening indicated that the community surrounding the plant exceeded state averages for minority population, age, and lack of education.<sup>275</sup> And according to the Department, the community already struggles with water-related issues, performing worse than 82–90% of their peers in indicators of water pollution.<sup>276</sup> The Board should, however, take that analysis with a grain of salt. The Department has advised the Air Pollution Control Board that it “wouldn’t really rely on EJSCREEN” to determine whether a particular area is an EJ community,<sup>277</sup> and the Fourth Circuit’s decision in *Friends of Buckingham* points to evidence that EJSCREEN significantly undercounts minority populations.<sup>278</sup>

There is similar evidence in the permitting record here. An October 2019 e-mail message from Dr. Mary Finley-Brook, an Associate Professor of Geography, Environmental Studies & Global Studies at the University of Richmond, cites 2018 census data indicating that “the population of the area is majority people of color, with African American populations making up” a plurality of the population.<sup>279</sup> Dr. Finley-Brook also provides a report from Stephen Metts of The New

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272 Virginia Code § 67-102(A)(11).

273 *Id.* § 67-102(C).

274 See Air Board Transcript, *supra* note 219, at 210:16–210:19. As described by the Environmental Protection Agency, “EJSCREEN is an environmental justice mapping and screening tool that provides EPA with a nationally consistent dataset and approach for combining environmental and demographic indicators.” United States Environmental Protection Agency, *What is EJSCREEN?*, <https://www.epa.gov/ejscreen/what-ejscreen> (October 28, 2019); see also generally United States Environmental Protection Agency, *EJSCREEN Environmental Justice Mapping & Screening Tool: Technical Documentation* (September 2019), available at <https://bit.ly/2S1j5E9> and enclosed as Exhibit 44 to these comments.

275 See Air Board Transcript, *supra* note 219, at 214:19–215:3. The Department’s EJSCREEN results also appear in the permitting record of this case. See Exhibit 45.

276 Air Board Transcript, *supra* note 219, at 216:24–217:5.

277 *Friends of Buckingham*, 947 F.3d at 89.

278 *Id.* (noting conflict between EJSCREEN results showing a 37–39% minority population and those of another study in the permitting record, which found an 83.5% minority population).

279 See Exhibit 46 to these comments.

School indicating that the minority population within 1–2 miles of the plant may exceed 65%.<sup>280</sup> A separate, November 15, 2019 e-mail from Dr. Finley-Brook to Mr. Grist reiterates that the “demographic composition of th[e] impacted community is more than 50% people of color.”<sup>281</sup> But even *without* that additional evidence in the permitting record, the Department’s EJSCREEN results alone necessitate an analysis of EJ impacts.<sup>282</sup>

After being reprimanded by the Fourth Circuit for treating EJ as “merely a box to be checked,”<sup>283</sup> the Department fails here to even acknowledge such a box exists.<sup>284</sup> That failure is particularly disturbing in light of the Department’s assurances to this Board’s sister-agency that it would “robustly address environmental justice concerns” regarding Chickahominy’s plant going forward.<sup>285</sup> While that promise may not be enforceable, the legal requirement for an EJ analysis surely is.<sup>286</sup> And without that analysis, the Board cannot issue a permit “in accordance with law.”<sup>287</sup>

**Comment No. 7: The Department and Chickahominy have failed to evaluate potential impacts associated with climate change.**

In evaluating a permit request or establishing permit conditions, the Board’s own regulations require that its analysis consider “[c]limatic cycles.”<sup>288</sup> And for good reason: “[o]bservational data and climate predictions provide abundant evidence that freshwater resources (both surface and groundwater resources) are vulnerable and have the potential to be strongly affected by climate change, with wide-ranging consequences for society and ecosystems.”<sup>289</sup> According to

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280 *Id.*

281 *See* Exhibit 47 to these comments.

282 *Friends of Buckingham*, 947 F.3d at 81 (quoting Virginia Code § 2.2-4029).

283 *Id.* at 68, 92.

284 Importantly, public commenters brought the need for an EJ analysis to the Department’s attention *before* the Department finalized the Fact Sheet in support of its recommendation. *Compare* Fact Sheet (dated November 22, 2019) *with* Exhibit 46 (dated October 20, 2019), Exhibit 47 (dated November 15, 2019).

285 *See* Air Board Transcript, *supra* note 219, at 405:21–405:5.

286 *See Friends of Buckingham*, 947 F.3d at 87.

287 *Id.* at 81 (quoting Virginia Code § 2.2-4029).

288 9 VAC § 25-610-110(D)(4)(e) (“The Board *shall* also take . . . into consideration when evaluating a groundwater withdrawal permit application or special conditions associated with a groundwater withdrawal permit . . . [c]limatic cycles.”) (emphasis added).

289 Timothy R. Green *et al.*, *Beneath the Surface of Global Change: Impacts of Climate Change on Groundwater*, 405 JOURNAL OF HYDROLOGY 532, 533 (2011), available at <https://bit.ly/2Gommae> and enclosed as Exhibit 48 to these comments.

researchers, “even small changes in recharge, discharge, or groundwater storage will have economic or environmental consequences” in areas approaching “the limits of groundwater sustainability.”<sup>290</sup>

Virginia’s Eastern Coastal Plain is one of those areas. The Department warned in 2015 that the region’s “groundwater resources are *already* oversubscribed, not sustainable for the long term at current use, and are contributing to increased land subsidence and saltwater intrusion potential.”<sup>291</sup> Even accepting that the Department’s subsequent Coastal Plain Groundwater Initiative ushered in a state of “tenuous sustainability,”<sup>292</sup> the General Assembly’s Legislative Review Commission found that “[e]ven relatively small increases in withdrawals by permitted users, in combination with the projected growth in unpermitted use, will lead to demand being greater than supply, leading again to unsustainable use.”<sup>293</sup> More recent literature is consistent with that finding, warning that “the Commonwealth should proceed with caution to avoid overusing this resource as the state of our climate and warming trends remain in flux.”<sup>294</sup>

One thing is certain: “Climate change *will* impact recharge rates, and therefore the depth of available groundwater.”<sup>295</sup> Nowhere in the Department’s analysis, however, are the potential impacts of climate change on groundwater resources addressed. The term “climate change” does not, in fact, appear once in the analysis; nor does anything in the analysis indicate that the changing conditions occasioned by climate change at all factor into the Department’s analysis. This is particularly alarming given the fact that fossil-fueled infrastructure like Chickahominy’s plant will exacerbate climate conditions.<sup>296</sup> To leave that issue unaddressed is to “entirely ignore[an] important aspect[ ] of the problem,” rendering any decision on Chickahominy’s request arbitrary and capricious as a matter of law.<sup>297</sup>

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290 *Id.* at 554.

291 2015 Water Resources Plan, *supra* note 2, at 45.

292 Joint Legislative Audit & Review Commission, *supra* note 82, at i.

293 *Id.* at 11.

294 Lubrano & Moore, *supra* note 95, at 8 (citing Green, *supra* note 289).

295 *Id.* (citing Fulco Ludwig & Marcus Moench, *The Impacts of Climate Change on Water*, CLIMATE CHANGE ADAPTATION IN THE WATER SECTOR (2009)) (emphasis added).

296 See Engineering Analysis, *supra* note 66, at 5, 8 (estimating that the plant will annually emit greenhouse gases with a global warming potential equivalent to 6.5 million tons of carbon dioxide).

297 See *Friends of Buckingham*, 947 F.3d at 80 (quoting *Appalachian Voices v. State Water Control Board*, 912 F.3d 746, 753 (4th Cir. 2019)) (both applying Virginia law).



**Comment No. 8: Because Chickahominy's plant is unneeded and will not benefit Virginia or Virginians, its withdrawal is not for a "beneficial use."**

When the Board evaluates a permit request, its regulations requires it to consider both the "nature of the use of the proposed withdrawal" and the "public benefit provided [there]by."<sup>298</sup> Accordingly, the Department has denied withdrawal permits for uses—particularly non-human-consumption uses—that do not qualify as sufficiently "beneficial" under the circumstances.<sup>299</sup> Adherence to that principle demands denying Chickahominy's request to supply a facility that is neither necessary nor beneficial to its neighbors, the Commonwealth, or the broader interstate electricity system.

It is important to recognize at the outset that no state or federal agency has determined there is a need for Chickahominy's proposed plant.<sup>300</sup> Because Chickahominy is a merchant generator and not a public utility, it was not required to justify a need for new generation before the State Corporation Commission.<sup>301</sup> And because Chickahominy intends to bid into PJM's wholesale marketplace,<sup>302</sup> the plant will not directly serve Virginia or Virginians. Energy produced at the facility could end up anywhere within PJM's thirteen-state marketplace, while the impacts on the Commonwealth's air and water resources will be felt by Virginians alone.

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298 9 VAC § 25-610-110(D)(4)(a)–(b).

299 Middle Peninsula Planning District Commission, *Middle Peninsula Water Reuse Study* at 9 (2014), available at <https://bit.ly/3aDlegQ> and enclosed as Exhibit 49 to these comments (explaining that when Colonial Downs Race Track in New Kent County "attempted to renew their permit for groundwater in 2007[,] DEQ deemed irrigation for the racetrack a 'non-beneficial' use, and denied the permit for additional irrigation / dust control allocation").

300 We note that, while Chickahominy is not required to demonstrate need, public water systems in the region have been forced to justify to their ratepayers the necessity of raising rates as a consequence of the Department's Coastal Plain Groundwater Initiative. See Joint Legislative Audit & Review Commission, *supra* note 82, at 12 ("[I]n response to DEQ's initiative to reduce its groundwater permit, the James City Service Authority (JCSA), which provides water and wastewater service for James City County, has recently embarked on a long-term, \$128 million water surface water supply project that will reduce its reliance on groundwater. This project will raise the cost of water for residential users that rely on this public water supplier.").

301 See Virginia Code § 56-580(D) (requiring applicants for a certificate of public convenience and necessity demonstrate their proposed facilities are "required by the public convenience and necessity" *only* "if they are to be constructed and operated by a[ ] regulated utility whose rates are regulated" by the Commission).

302 See Chickahominy Final Order, *supra* note 69 at 3 ("C[hickahominy] would operate [its] Facility as an exempt wholesale generator supplying wholesale power to the PJM Interconnection").

Even if the Board evaluated the project based on its potential contribution to the interstate wholesale market, the evidence suggests Chickahominy's plant is destined to join a raft of unnecessary generation in a market already awash with capacity. A recent S&P Global report describes a burgeoning "trend seen across much of the U.S. power grid"—the continued build of "new gas plants despite flat electricity demand and rapidly falling prices for energy from renewable sources."<sup>303</sup> This "glut of generation capacity" means that the now-rising "generation of gas plants . . . are likely to become uneconomic and shut down long before their planned retirements."<sup>304</sup>

For merchant generators, conditions in the PJM market are particularly dismal. Despite slack demand for electricity in PJM's territory, more than 29,000 megawatts of new gas-fired capacity has come online since 2008.<sup>305</sup> As a result, PJM's current reserve margin—the cushion of available capacity above expected peak demand—is double the target amount PJM believes is necessary to "maintain desired reliability."<sup>306</sup> On top of that surplus, an additional 30,000 megawatts of new gas capacity is planned by 2027.<sup>307</sup> That new crop of gas plants—a class that includes both Chickahominy and C4GT—will increase PJM's surplus to nearly four times its target reserve margin.<sup>308</sup>

Recent expert testimony before the West Virginia Public Service Commission confirms that the "PJM power market has a substantial excess of capacity now and for the coming years,"<sup>309</sup> and there is simply "no need for additional capacity."<sup>310</sup> Nor is there reason to believe significant need will materialize in the foreseeable future. Load is driven primarily by demographic and economic trends, as well as efficiency and penetration of new appliances. However, "[n]one of

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303 Stephanie Tsao & Richard Martin, *Overpowered: Why a US Gas-Building Spree Continues Despite Electricity Glut*, S&P GLOBAL (December 2, 2019), available at <https://bit.ly/2H5uTiD> and enclosed as Exhibit 50 to these comments.

304 *Id.*

305 *Id.*

306 *Id.*; PJM Interconnection, *Manual 20: PJM Resource Adequacy Analysis* at 14 (March 21, 2019), available at <https://bit.ly/2HfRklc> and enclosed as Exhibit 51 to these comments (defining the reserve requirement as "the level of installed reserves needed to maintain the desired reliability . . . after emergency procedures to invoke load management").

307 Tsao & Martin, *supra* note 303.

308 *Id.*

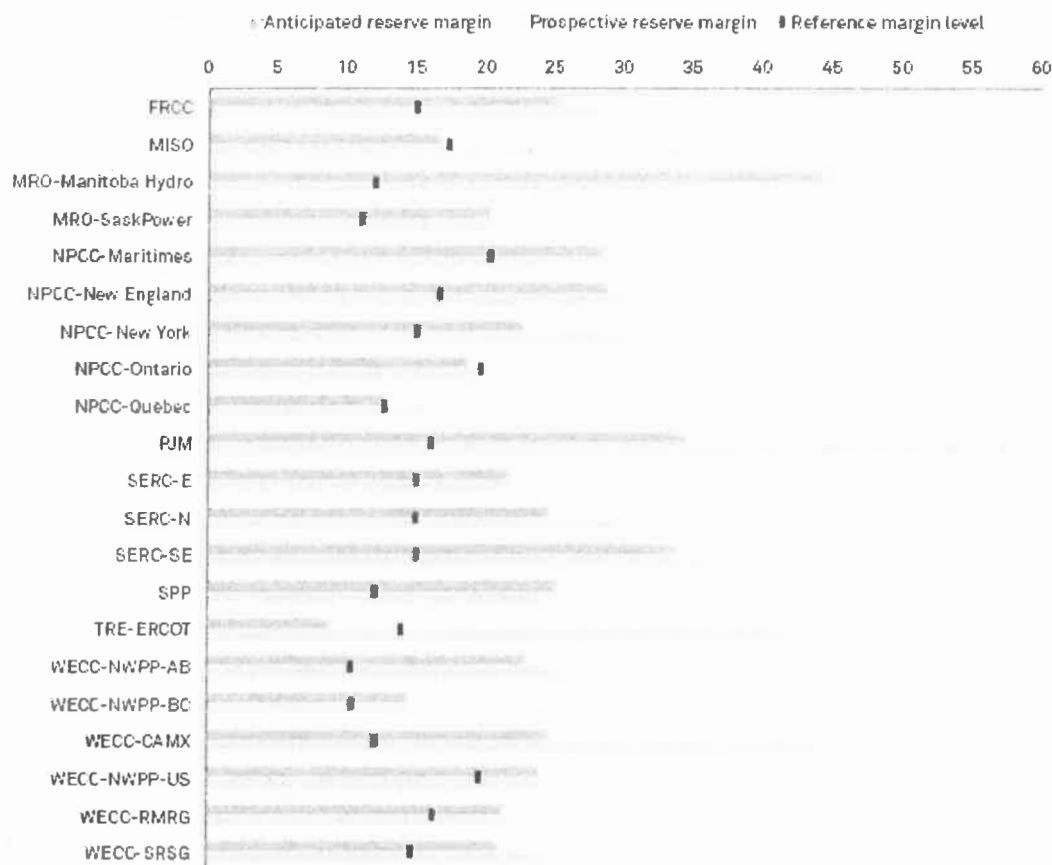
309 *Longview Power II*, West Virginia Public Service Commission Case No. 19-0890-E-CS-CN, Direct Testimony of James F. Wilson at 3 (January 3, 2020), available at <https://bit.ly/2RoG5Nb> and enclosed as Exhibit 52 to these comments.

310 *Id.*

these drivers suggests a sudden change in the now well-established pattern of flat or falling peak loads.”<sup>311</sup>

**Figure 1: Target, anticipated and prospective reserve margins, 2023 (%)**

Target, anticipated and prospective reserve margins, 2023 (%)



As of Dec. 20, 2018.  
Reserve margins by North American Electric Reliability Corp. assessment areas.  
Anticipated reserves are certain to be available based on current operating resources.  
Prospective reserves are highly likely to be available based on utility resource plans.  
Source: NERC

Source: Tsao & Martin, *supra* note 303.

As discussed further below, these conditions have made it difficult for merchant generators like Chickahominy to attract the necessary capital for new gas-fired generation.<sup>312</sup> But even if Chickahominy succeeds in attracting the “highest-risk investment capital” necessary to back its project, there is no reason for the Board to take the drastic step of “allocat[ing] the last remaining

<sup>311</sup> *Id.* at 20.

<sup>312</sup> Raymond L. Gifford *et al.*, *The Breakdown of the Merchant Generation Business Model: A Clear-Eyed View of Risks and Realities Facing Merchants* at 6 (June 2017), available at <https://bit.ly/372P1MB> and enclosed as Exhibit 53 to these comments.

increment of available groundwater supply within a multi-county area” for a “use other than human consumption”<sup>313</sup> so unlikely to provide appreciable benefits to the Commonwealth or its people. Perhaps Chickahominy can convince its investors to swing for the fences. But it would be imprudent for the Board to bet, on behalf of the Virginians it represents, against the “significant” risk that Chickahominy’s project is destined to join a growing cadre of stranded fossil-fueled assets.<sup>314</sup> A slim possibility of marginal utility cannot outweigh the numerous factors outlined above—the fundamental inconsistency with the text and spirit of the Act, the failure to pursue practicable alternatives, the disproportionate impact on a disadvantage community—that weigh heavily in favor of denying Chickahominy’s request.

**Comment No. 9: The Board should defer any action on Chickahominy’s request until there is greater certainty surrounding the project.**

Groundwater allocation in the Coastal Plain is a zero-sum exercise. Even if Chickahominy’s proposal met the technical requirements for a permit or special exception, the fact remains that awarding *any* permit inflicts a steep opportunity cost on the community. Allocating groundwater to the facility now will prohibit other forms of growth and development, a phenomenon that the Joint Legislative Audit & Review Commission specifically highlighted in reviewing the Department’s administration of the permitting program:

Substantial industrial use of low cost, high quality water has the effect of “crowding out” higher priority use for human consumption. This crowding out is contributing to one municipal water authority embarking on a \$128 million water supply project to develop alternatives to groundwater.<sup>315</sup>

That cost—and the cost of future projects made necessary by allocation of groundwater for non-human-consumption uses—will be borne by the residential users that rely on public water suppliers.<sup>316</sup> Harder to calculate, however, is the opportunity cost incurred when other industries avoid settling in the area due to the fact that, so long as groundwater is already allocated, “new permit requests (for example, requests by industries seeking to locate in the region) for even a moderate amount of groundwater cannot be accommodated.”<sup>317</sup>

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313 See Exhibit 30, *supra* note 103, at 3.

314 See Tsao & Martin, *supra* note 303 (“[A]ccording to a pair of reports from the Rocky Mountain Institute, or RMI, an advocate for low-carbon energy resources, [w]ith about \$90 billion worth of new gas plants and \$30 billion of pipelines proposed or planned for construction, the risk of stranded assets is ‘significant.’”).

315 Joint Legislative Audit & Review Commission, *supra* note 82, at ii.

316 *Id.* at 12.

317 *Id.* at i.

Charles City County may have already incurred an opportunity cost of that kind. The Department's Fact Sheet notes that, in 2002, a "groundwater withdrawal permit (GW0005400) was previously issued to a different owner to construct a power plant on the same site" as the Chickahominy project.<sup>318</sup> Although the project never materialized, its proponents still held a groundwater permit for several years.<sup>319</sup> During that time, the facility's projected groundwater use was removed from the pool available to other utilities or industries—even though the proponent never beneficially used the water.<sup>320</sup>

The Department stands poised to repeat the mistake here. There is little reason to think that Chickahominy's current proposal will succeed where its 2002 counterpart did not. A recent analysis led by the former Chairman of the Colorado Public Utilities Commission warns that the merchant generation sector is currently "in crisis:" "[f]at demand growth, increasing renewable generation with zero variable cost, and historically low gas prices create headwinds" that "erode the viability of current merchant plants (absent an 'around market' subsidy) and render investments in new merchant generation tolerable for only the highest-risk investment capital."<sup>321</sup> As for new merchant plant proposals, the analysis explains that the "stark economics facing these plants makes it seem that either these planned additions will not be able to attract the capital to be built, or that the developers are betting on sustained and significant increases in prices to attract capital."<sup>322</sup> That is a risky bet, however, because the trends driving slow load growth and increased competition from renewables show no signs of reversing.<sup>323</sup>

By all accounts, Virginia merchant generators face the same headwinds described above. Citing declining interest by investors in its project, C4GT recently asked the State Corporation Commission for an extension of the two-year sunset provision in its certificate of public convenience and necessity.<sup>324</sup> Despite obtaining all necessary environmental permits—including,

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318 Fact Sheet at 2.

319 *Id.*

320 In evaluating whether a withdrawal request satisfies the 80% criterion, the Board must model the effect of the proposed withdrawal "*in combination with the stabilized combined effects of all existing lawful withdrawals.*" 9 VAC § 25-610-108(D)(3)(h) (emphasis added). According to the Department's permitting guidance manual, even "*pending permits are simulated when running a Total Permitted scenario.*" See Withdrawal Permit Manual, *supra* note 125, at 33 (emphasis added).

321 Gifford, *supra* note 312, at 1, 8.

322 *Id.* at 6.

323 *Id.* at 4; see also *supra* note 311 and accompanying text.

324 See *Petition of C4GT*, Virginia State Corporation Commission Case No. PUE-2016-00104, Petition to Extend Sunset Provision at ¶ 5 (March 1, 2019), available at <https://bit.ly/2vZiF8M> and enclosed as Exhibit 54 to these comments ("[I]n 2017, the near-

notably, its surface water withdrawal permit<sup>325</sup>—C4GT explained that it needed additional time to mount a “comprehensive effort to finalize financing for the Facility.”<sup>326</sup> By all accounts, Chickahominy is facing the same headwinds: in applying for its own certificate from the Commission, Chickahominy estimated a commercial operation date of Q2 2020.<sup>327</sup> It too has had to substantially temper those expectations.<sup>328</sup>

There are more-telling indications throughout the permitting record that Chickahominy is struggling to maintain the viability of its project. Chickahominy has advised the Department that “to obtain financing, [it] require[s] a secure source of water for a minimum of ten years post commercial operation.”<sup>329</sup> In other words, granting the seven-year special exception recommended by the Department would likely give Chickahominy only *half* the runway that it, by its own admission, “require[s] as . . . a minimum” to obtain financing.<sup>330</sup> Chickahominy has also expressed concerns that several general conditions of the Department’s draft special exception—conditions that the Board’s regulations require, without exception, in all groundwater permits<sup>331</sup>—“represent[ ] potential ‘regulatory out’ provision[s] that would cause uncertainty to the permit status for project lenders.”<sup>332</sup> In a similar vein, Chickahominy previously advised the Board’s sister-agency last summer that it cannot afford even a 30-day delay in its permitting schedule, claiming that “[i]f the process is delayed further . . . [t]he project dies.”<sup>333</sup>

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term market for additional electric generating capacity in the PJM region changed causing investor interest in such projects to decline.”).

325 *Id.* at ¶ 9(b).

326 *Id.* at ¶ 5.

327 See Chickahominy CPCN Application, *supra* note 253, Exhibit 1 at 10.

328 A May 1, 2019 memorandum in the Department’s permitting file suggests Chickahominy aims to complete construction in 2022. See Exhibit 38, *supra* note 213. The Department’s engineering analysis accompanying Chickahominy’s pre-construction air quality permit, dated several weeks *after* the May 2019 memorandum, lists a proposed startup date of May 1, 2021. See Engineering Analysis, *supra* note 66, at 8. Given the current status of the project, however, the actual startup date will be significantly later than either of these projections.

329 See Exhibit 55 (September 11, 2019 e-mail from Scott Kudos to Joseph Grist, incorporating August 27, 2019 e-mails from Ken Baybutt to Scott Kudlas and from Jef Freeman to Ken Baybutt).

330 Assuming Chickahominy begins operations in 2022, see *supra* note 328, it would operate for five years before the proposed special exception would expire in 2027.

331 See 9 VAC § 25-610-140(G)(1).

332 See Exhibit 56 (September 30, 2019 memorandum from Ryan Green to Scott Kudlas).

333 See Air Board Transcript, *supra* note 219, at 33:21–34:1 (comments of John Byrum, counsel for Chickahominy Power).

According to the analysis cited above, however, adverse market conditions only partially account for the challenges facing independent power producers. The economic woes of merchant generators are “compounded by the difficulty of planning investments in competitive generation, which in many ways is materially more difficult than in other industries”—due in large part to “significant regulatory changes.”<sup>334</sup> Those “policy shifts could take the form of . . . state-level policy changes such as the enactment of renewable portfolio standards, clean peak standards or zero emission credit constructs.”<sup>335</sup>

In this respect, too, Chickahominy’s fate is uncertain. Although Virginia is on track to join the Regional Greenhouse Gas Initiative (RGGI)—a multi-state, market-based platform for reducing carbon emissions—Chickahominy’s role within that platform is unclear.<sup>336</sup> Although a bill is currently pending before the General Assembly that would automatically allocate carbon allowances to both Chickahominy and C4GT,<sup>337</sup> the terms under which Virginia joins RGGI are likely to render that bill “obsolete.”<sup>338</sup> In that case, Chickahominy would be forced to compete with other emitters for carbon allowances instead of benefitting from the multi-billion-dollar windfall proposed in the pending bill.

In short, the economic and regulatory outlook for Chickahominy is uncertain at best. Although Chickahominy has stressed to the Department that there is “no assurance that the [rival C4GT] project will proceed,”<sup>339</sup> the same can be said of Chickahominy’s ambitions. Virginia law requires the Board to exercise its regulatory authority in a manner that prevents “the waste or unreasonable use or unreasonable method of use of water.”<sup>340</sup> Allocating a precious resource to a project that is, by its developer’s own admission, teetering on the razor’s edge of viability would be inconsistent with that mandate.<sup>341</sup> If Chickahominy beats the odds, the Board is free to take up its request for allocation at a later date. But until the Board receives further assurance that Chickahominy is not requesting merely to hoard a groundwater allocation while it waits for sunnier market conditions, it should deny the permit on the record at hand.

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334 See Gifford, *supra* note 312, at 2–3.

335 *Id.* at 3.

336 See generally Sarah Vogelsong, *Bill to Protect Two Charles City Gas Plants from RGGI Effects Moving Quietly Through Senate*, VIRGINIA MERCURY (February 6, 2020), available at <https://bit.ly/37c3WV3> and enclosed as Exhibit 57 to these comments.

337 See Senate Bill No. 992 (January 16, 2020), available at <https://bit.ly/2StLVw4>.

338 Vogelsong, *supra* note 336.

339 Exhibit 37, *supra* note 203, at 1.

340 Virginia Code § 62.1-11(C).

341 See *supra* note 333 and accompanying text.

## REQUEST FOR PUBLIC HEARING

Under 9 VAC § 25-610-250(C)—and in accordance with Virginia Code § 62.1-44.15:02 and 9 VAC § 25-230-40—the Sierra Club, the Chesapeake Climate Action Network, Virginia Interfaith Power & Light, Concerned Citizens of Charles City County, and Friends of Buckingham request a public hearing on the proposed special exception. In support of their request, they state:

1. The undersigned's name, mailing address, telephone number, and e-mail address are:

Evan Dimond Johns  
APPALACHIAN MOUNTAIN ADVOCATES  
Post Office Box 507  
Lewisburg, West Virginia 22902  
Telephone: (434) 738 - 1863  
E-Mail: *ejohns@appalmad.org*

2. The undersigned submits these comments as a representative of the Sierra Club, the Chesapeake Climate Action Network, Virginia Interfaith Power & Light, Concerned Citizens of Charles City County, and Friends of Buckingham. Their mailing addresses and telephone numbers are:

SIERRA CLUB - VIRGINIA CHAPTER  
442 East Franklin Street, Suite 302  
Richmond, Virginia 23219  
Telephone: (804) 225 - 9113

CHESAPEAKE CLIMATE ACTION NETWORK  
33 South Thirteenth Street, Suite C  
Richmond, Virginia 23219  
Telephone: (804) 213 - 2438

VIRGINIA INTERFAITH POWER & LIGHT  
1716 East Franklin Street  
Richmond, Virginia 23223  
Telephone: (804) 505 - 4624

CONCERNED CITIZENS OF CHARLES CITY COUNTY  
c/o Wanda Roberts  
2000 Morris Creek Landing Road  
Charles City, Virginia  
Telephone: (804) 829 - 9060



FRIENDS OF BUCKINGHAM  
Post Office Box 61  
Buckingham, Virginia  
Telephone: (434) 226 - 0282

3. The public has a significant interest in the proposed special exception. Chickahominy seeks approval to construct and operate a facility that would become the largest gas-fired power plant in the Commonwealth. Despite the fact that no state or federal agency has determined there is a need for such a facility in Virginia or elsewhere, the plant will have significant impacts on the Commonwealth's air and water resources. In addition, the project is inconsistent with the public policy of Virginia, as reflected in statutory and regulatory mandates to reduce greenhouse gas emissions, to minimize disproportionate impacts of energy projects on disadvantaged communities, and to protect the availability of groundwater resources for human consumption and other beneficial uses.

The substantive comments set forth above are incorporated into this request by reference. These comments must be addressed in order to bring the proposed permitting action into compliance with, among other things, the Ground Water Management Act of 1992 and the Board's regulations implementing that Act. The comments raise substantial and issues relevant to the issuance of the special exception in question. Furthermore, the actions requested above are not inconsistent with the Act, the Board's regulations, or any other applicable law or regulation. The actions requested are, in fact, necessary in order to comply with Virginia law.

4. The Sierra Club is a nonprofit conservation organization with more than 3.8 million members and supporters nationwide and approximately 20,000 dues-paying members in Virginia. The Club is dedicated to exploring, enjoying, and protecting the wild places of the Earth; to practicing and promoting responsible use of the Earth's resources and ecosystems; to educating and enlisting humanity to protect and restore the quality of the natural and human environment; and using all lawful means to carry out those objectives. Through its Climate Action campaign, the Club's Virginia Chapter encourages investments in the Commonwealth's substantial renewable energy potential.

The Chesapeake Climate Action Network (CCAN) is the first grassroots, nonprofit organization dedicated exclusively to fighting climate change and all of the harms fossil-fuel infrastructure causes in Maryland, Virginia, and Washington, D.C. and to securing policies that will put us on a path to climate stability. In support of its mission, CCAN and its 11,000 members in Virginia oppose projects that could contribute to climate change, harm the public, and degrade water resources.

Virginia Interfaith Power & Light (VAIPL) is the state affiliate of a national organization, Interfaith Power & Light. VAIPL responds to climate change by gathering, sharing, and advocating ecological wisdom through interfaith collaboration on behalf of current and future generations. VAIPL strives to empower all faith communities across the Commonwealth of Virginia to achieve sustainable living. VAIPL has over 4,000 active

supporters across the state of Virginia and has engaged with more than 200 faith communities and congregations. Its work focuses on providing faith communities with the resources and tools they need to act on climate and encouraging faith communities to speak out on the issue of climate change by advocating for climate justice.

Concerned Citizens of Charles City County (C5) is a group of Charles City County residents formed to inform and educate other County residents about issues facing their community. A central concern for the group is the approval of multiple power plant-related permits in the County with limited involvement from residents.

Friends of Buckingham (FoB) is a community organization centered in Buckingham County, Virginia, and focused on preserving and celebrating the natural resources and culture heritage of rural Virginia. To that end, FoB is committed to protecting public health and the environment from outside interests that seek to exploit natural resources. As a result of recent fossil fuel infrastructure build-out proposed in Buckingham County, FoB is particularly concerned about environmental justice in Virginia and protecting the health, quality of life, and rich cultural heritage of the Commonwealth's diverse communities.

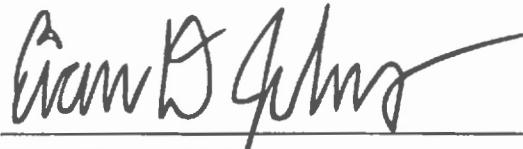
Sierra Club, CCAN, VA IPL, C5, and FoB members live, exercise, work, raise children, garden, fish, boat, and recreate on a regular basis near the proposed project and rely on the aquifers and airsheds it would affect. As such, the Sierra Club, CCAN, VA IPL, C5, FoB, and their members have immediate, pecuniary, and substantial interests in the outcome of this permitting proceeding and would be adversely affected by the construction and operation of the facility.

5. The comments above concern Chickahominy's ineligibility for a permit or special exception under the Act and the Board's implementing regulations, rather than any remediable deficiency in the terms and conditions of the draft special exception. Several of the comments above do, however, point to deficiencies in the Department's review of the permit—including its practicable alternatives analysis, its failure to conduct an EJ analysis, and its failure to address climate change. Correcting those deficiencies would be necessary—but not sufficient—to bring any permit or special exception into conformance with the Ground Water Management Act of 1992, the Energy Policy of the Commonwealth, the State Policy as to Waters, and the Administrative Process Act.

## CONCLUSION

The Department's recommendation is inconsistent with Virginia law and with the Board's duty to conserve and protect groundwater for domestic uses "over all others." We urge the Board to reject that recommendation, deny the special exception, and ensure Virginia's groundwater resources benefit those who need them most.

Respectfully submitted,



**Evan Dimond Johns**

(Virginia State Bar No. 89285)

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*On behalf of the Sierra Club, the Chesapeake  
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Power and Light, Concerned Citizens of Charles  
City County, and Friends of Buckingham*

Enclosure: Disc with 57 Exhibits to Comments

Copied via Electronic and United States Mail:

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February 14, 2020

*Via email to:*

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Members of the State Water Control Board  
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**Re: Draft Groundwater Withdrawal Special Exception Permit for the Chickahominy Power Station (No. GW0078700)**

Dear Chairwoman Wood, Members of the Board, Director Paylor, and Mr. Grist:

Southern Environmental Law Center (SELC), Concerned Citizens of Charles City County, Virginia Environmental Justice Collaborative, and Mothers Out Front offer the following comments on the draft groundwater withdrawal special exception permit for the Chickahominy Power Station (No. GW0078700). Specifically, we request that the State Water Control Board deny Chickahominy's application for the following reasons:

- Under the Virginia Energy Plan, the Virginia Department of Environmental Quality (DEQ) must conduct an environmental justice analysis for energy facilities to ensure that their development will not disproportionately impact economically disadvantaged or minority communities.
- DEQ should conduct this environmental justice analysis at the start of the permitting process and specifically apply it to each permit review for an energy facility to ensure that the overall development of the project will not result in a disproportionate adverse impact.

- But DEQ’s environmental justice analysis for the Chickahominy Power Station—conducted in 2019 during the review of the air permit—was critically flawed and now must be corrected during this next step in the permitting process.
- Finally, issuing a groundwater withdrawal permit for an industrial use from the taxed Potomac Aquifer sets poor groundwater management policy in the Commonwealth.

If built, the 1,650 MW Chickahominy Power Station would be the largest fossil fuel-fired power station in the Commonwealth.<sup>1</sup> Chickahominy Power, LLC proposes to withdraw 30 million gallons of groundwater annually for seven years from the taxed Potomac Aquifer to run its power station.<sup>2</sup> The facility would be located in Charles City County, a majority-minority county already burdened with a second proposed fossil fuel-fired power station, C4GT.<sup>3</sup> Because the Chickahominy Power Station is an energy facility, it is subject to the Virginia Energy Plan’s environmental justice objective of ensuring development of energy facilities will not have a disproportionate adverse impact on economically disadvantaged and minority communities.<sup>4</sup> An environmental justice analysis should be done at the start of a facility’s permitting process and should be considered throughout the multiple permitting processes required for development of energy facilities. This includes the groundwater withdrawal permit that would authorize significant withdrawals from a stressed aquifer that Charles City County residents rely on for drinking water. Accordingly, it is critical that DEQ’s environmental justice analysis for the facility is accurate.

As the United States Court of Appeals for the Fourth Circuit recognized in its recent decision in *Friends of Buckingham v. State Air Pollution Control Board*, “environmental justice is not merely a box to be checked[.]”<sup>5</sup> But that is precisely what DEQ did for the Chickahominy Power Station. In *Friends of Buckingham*, the Fourth Circuit vacated and remanded the Virginia Air Pollution Control Board’s permit for construction of the Buckingham Compressor Station in the historic African-American community of Union Hill because of its flawed environmental justice analysis.<sup>6</sup> Critically, DEQ’s unlawful analysis led some to doubt the existence of the Union Hill community during the permitting process.<sup>7</sup> So, it is particularly concerning that

<sup>1</sup> Sarah Vogel song, *Comment closes Wednesday on permit for giant new natural gas power plant in Charles City*, Virginia Mercury (Mar. 19, 2019), <https://www.virginiamercury.com/2019/03/19/comment-closes-wednesday-on-permit-for-new-natural-gas-power-plant-in-charles-city/>.

<sup>2</sup> Va. DEQ, Chickahominy Draft Special Exception Issuance Fact Sheet (GW0078700) 3, 5 (Nov. 22, 2019), <https://www.deq.virginia.gov/Portals/0/DEQ/Water/OWS-WWPandC/Draft%20Fact%20Sheet-Chickahominy%20Power-11-22-19.pdf?ver=2019-12-03-091443-603>.

<sup>3</sup> Vogel song, *supra* note 1.

<sup>4</sup> See Va. Code §§ 67-101(12), 67-102(A)(11).

<sup>5</sup> *Friends of Buckingham v. State Air Pollution Control Bd.*, 947 F.3d 68, 92 (4th Cir. 2020).

<sup>6</sup> *Id.* at 71-72.

<sup>7</sup> *Id.* at 88 (noting that “[t]hroughout the public comment period and public meetings, one of the main points of dispute was whether the Union Hill community could be deemed a ‘minority’ EJ community.”).

DEQ's environmental justice analysis for the Chickahominy Power Station suffered from many of the same inadequacies as its analysis for the Buckingham Compressor Station. DEQ must now take this permitting opportunity to correct its flawed environmental justice analysis for the facility. To ensure the same critical errors do not occur with the Chickahominy Power Station that did with the Buckingham Compressor Station, and to carry out the objectives of the Virginia Energy Plan, the State Water Control Board should deny Chickahominy's application for a groundwater withdrawal special exception permit until DEQ conducts a meaningful environmental justice review for the facility. At a minimum, the Water Board should suspend the permitting process until such an analysis is complete.

**I. DEQ's environmental justice analysis for the Chickahominy Power Station was critically flawed.**

A clear picture of the people who will be burdened by the numerous environmental impacts of an energy facility should be the first step of an environmental justice analysis and permitting process. DEQ conducted an environmental justice analysis for the Chickahominy Power Station at the start of the facility permitting process, with issuance of an air permit. Unfortunately, DEQ's analysis for the power station did not provide the public with a clear or accurate picture of the communities near the proposed facility.

**A. DEQ misused EJSCREEN to conclude there were no environmental justice communities in the area surrounding the Chickahominy Power Station.**

DEQ relied on EJSCREEN to determine the demographics of the area surrounding the Chickahominy Power Station, as it did for the Buckingham Compressor Station, and to conclude that no environmental justice communities existed.<sup>8</sup> But as SELC and others have explained before, EJSCREEN is designed to give regulators and the public a preliminary, approximate understanding of who might be affected.<sup>9</sup> It "is a pre-decisional screening tool" and is *not* "designed to be the basis for agency decisionmaking or determinations regarding the existence or absence of [environmental justice] concerns."<sup>10</sup> EJSCREEN relies on census data and estimates, often involving substantial uncertainty and masking specific, localized impacts of a project.<sup>11</sup> Indeed, during its November 2018 presentation to the Air Board regarding Union Hill, one DEQ staff member told the Board, "I wouldn't really rely on" EJSCREEN.<sup>12</sup> Despite these limitations, DEQ did just that and relied on EJSCREEN as the basis for its determination

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<sup>8</sup> *Id.* at 87-88.

<sup>9</sup> See e.g. Letter from Gregory Buppert, SELC, to Richard Langford, Chair, Va. Air Pollution Control Bd., and David Paylor, Dir., Va. DEQ 2-3 (Dec. 7, 2018), [https://www.deq.virginia.gov/Portals/0/DEQ/Air/BuckinghamCompressorStation/PUBLIC\\_COMMENT\\_DOC\\_2018\\_12\\_07\\_SELCLetter\\_to\\_Air\\_Board\\_re\\_Union\\_Hill\\_Demographics\\_FINAL\\_WITH\\_ATTACH.pdf](https://www.deq.virginia.gov/Portals/0/DEQ/Air/BuckinghamCompressorStation/PUBLIC_COMMENT_DOC_2018_12_07_SELCLetter_to_Air_Board_re_Union_Hill_Demographics_FINAL_WITH_ATTACH.pdf).

<sup>10</sup> Environmental Protection Agency, EJSCREEN: Environmental Justice Screening and Mapping Tool, <https://www.epa.gov/ejscreen/how-does-epa-use-ejscreen>.

<sup>11</sup> See Mary Finley-Brook, Environmental Injustices in Buckingham Compressor Station Siting and Permitting 8 (Jan. 4, 2019), [https://www.deq.virginia.gov/Portals/0/DEQ/Air/BuckinghamCompressorStation/10DayCommentPeriod/BCS\\_email\\_public\\_comments\\_received\\_1-4-2019\\_File\\_7\\_of\\_8.pdf](https://www.deq.virginia.gov/Portals/0/DEQ/Air/BuckinghamCompressorStation/10DayCommentPeriod/BCS_email_public_comments_received_1-4-2019_File_7_of_8.pdf).

<sup>12</sup> *Friends of Buckingham*, 947 F.3d at 89.

regarding the absence of environmental justice communities near the Chickahominy Power Station.<sup>13</sup> DEQ's misuse of EJSCREEN warrants revisiting its analysis.

Moreover, after *Friends of Buckingham*, DEQ cannot reasonably claim to have any confidence in its EJSCREEN conclusions. DEQ's substantially similar EJSCREEN analysis for the Buckingham Compressor Station concluded that the minority population varied between 37 to 39%, effectively denying the existence of the Union Hill community.<sup>14</sup> In reality, as counsel for the Commonwealth conceded at oral argument, "84-85% of the people who live within 1.1 [mile] of the Compressor [Station] are people of color predominantly African Americans."<sup>15</sup> How can DEQ now claim with any degree of confidence that the EJSCREEN results for the Chickahominy Power Station—showing minority population varied between 34 to 45%—present an accurate picture of the communities in the area surrounding the power station? If DEQ is committed to ensuring environmental justice for all, it will revisit its flawed environmental justice analysis for the Chickahominy Power Station to ensure it has a clear picture of the people who would be burdened by this facility.

**B. DEQ's inconsistent comparison to countywide and statewide demographics was arbitrary and diluted the potential for disproportionate impacts to minority communities.**

In responding to comments raising environmental justice concerns, DEQ noted that there were no economically disadvantaged environmental justice communities because income values within one, two, and five miles of the power station were above the average for the Commonwealth.<sup>16</sup> But without explanation, DEQ chose a different approach for identifying minority environmental justice communities. Instead of comparing minority populations to the average for the Commonwealth, it compared them to the average for Charles City County, in turn masking the disproportionate impacts of this facility on minority communities.<sup>17</sup> Had DEQ compared the minority population to the average for the *Commonwealth*, as it did for income levels, it would have concluded there was a minority environmental justice community. Based on the only data DEQ used, EJSCREEN, within one mile and two miles of the facility the

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<sup>13</sup> See Va. DEQ, Factors Considered Under Va. Code § 1307.E and Environmental Justice Presentation 23 (June 21, 2019),

<https://www.deq.virginia.gov/Programs/Air/ChickahominyPowerStation.aspx> (concluding that "[t]he population of area surrounding proposed power plant is not majority-minority[,] and "[r]esidents of area surrounding proposed plant have higher incomes on average than do residents of Virginia and the United States as a whole.").

<sup>14</sup> See Va. DEQ, Dec. 19, 2018 DEQ Presentation – Part 2, at 30,

<https://www.deq.virginia.gov/Programs/Air/BuckinghamCompressorStationAirPermit/BuckinghamamCompressorStationArchivedDocuments.aspx>.

<sup>15</sup> *Friends of Buckingham*, 947 F.3d at 88 n.10.

<sup>16</sup> Va. DEQ, Chickahominy Power Station Summary of and Response to Comments 6 (June 21, 2019),

[https://www.deq.virginia.gov/Portals/0/DEQ/Air/Chickahominy\\_Power\\_Plant/Documents/52610-001\\_summary\\_of\\_and\\_response\\_to\\_public\\_comments.pdf](https://www.deq.virginia.gov/Portals/0/DEQ/Air/Chickahominy_Power_Plant/Documents/52610-001_summary_of_and_response_to_public_comments.pdf).

<sup>17</sup> *Id.* ("all of the minority population values are below the average (52.8%) for Charles City County as a whole.").

minority population was 42% and 45%, respectively, which is above the 37% average for the Commonwealth.<sup>18</sup> It is unclear what led DEQ to use different comparisons for each factor and, notably, comparisons to statewide demographics better reveal the racial disparities that result from energy infrastructure development than comparisons to parent counties. Accordingly, DEQ should revisit its environmental justice determination and use a statewide comparison for both economically disadvantaged and minority communities. At a minimum, DEQ must explain its inconsistent approach that appears to favor finding no environmental justice communities.

DEQ must also revisit its summary dismissal of comments noting that Charles City County as a whole may be considered an environmental justice community because it is majority-minority.<sup>19</sup> In its response to comments, DEQ recognized that Charles City County is a majority-minority county.<sup>20</sup> But DEQ dismissed the possibility that this created environmental justice issues.<sup>21</sup> DEQ apparently reasoned that because the Charles City County Board of Supervisors represents the county, it must also represent environmental justice concerns.<sup>22</sup> And because the Board of Supervisors must represent environmental justice concerns, its issuance of a special use permit was equivalent to concluding there were no environmental justice issues with the facility.<sup>23</sup> Not so. DEQ cannot avoid its independent duty to consider the potential for disproportionate harm from development of energy facilities by relying on a local government decision that did not consider information or factors bearing on environmental justice.

**C. An independent study contradicts DEQ's conclusion that there are no environmental justice communities near the proposed Chickahominy Power Station.**

In addition to the serious inadequacies underlying DEQ's analysis, there is also evidence in the record that conflicts with DEQ's EJSCREEN-based determinations. Stephen Metts, a Professor at The New School, conducted an independent spatial data analysis of the Chickahominy Power Station for environmental justice.<sup>24</sup> Professor Metts' analysis identified four environmental justice eligible tracts in close proximity to the power station warranting further environmental justice review.<sup>25</sup> Three were minority environmental justice eligible tracts, with between 65 and 79% minority populations, and one was an economically disadvantaged environmental justice tract.<sup>26</sup> In *Friends of Buckingham*, the Air Board was similarly "presented with conflicting evidence about whether and how Union Hill was a

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<sup>18</sup> *Id.*

<sup>19</sup> *Id.* at 6-7.

<sup>20</sup> *Id.*

<sup>21</sup> *Id.*

<sup>22</sup> *Id.*

<sup>23</sup> *Id.*

<sup>24</sup> Stephen Metts, Chickahominy Power Plant Proposal – Independent Spatial and Demographic Analyses Finding Statement (June 4, 2019), [https://spatial-analysis-findings.s3.us-east-2.amazonaws.com/Independent+spatial+data+analyses+of+the+2019+Chickahominy+Power+Plant\\_6-4-19.pdf](https://spatial-analysis-findings.s3.us-east-2.amazonaws.com/Independent+spatial+data+analyses+of+the+2019+Chickahominy+Power+Plant_6-4-19.pdf).

<sup>25</sup> *Id.* at 4.

<sup>26</sup> *Id.*



'minority' EJ population."<sup>27</sup> The Fourth Circuit found the Air Board's failure to resolve this conflict "improper under both federal law, and Virginia administrative law."<sup>28</sup> Accordingly, if DEQ refuses to revisit its original environmental justice analysis for the facility, the Board must, at a minimum, resolve the conflicting evidence before it regarding the existence of environmental justice communities near the power station.

## **II. Issuing a groundwater withdrawal special exception permit to Chickahominy Power, LLC sets poor groundwater management policy.**

In its decisionmaking process, DEQ appears to have considered only two options: (1) issuing a groundwater withdrawal permit for a term of 15 years or more or (2) issuing a special exception permit for a term of 7 years.<sup>29</sup> Importantly, DEQ did not consider a third option: not issuing a groundwater withdrawal permit for an industrial facility in an area with identified groundwater resource limitations.<sup>30</sup> DEQ's decision to approve a special use permit, rather than simply require Chickahominy to select an alternative water supply, sets bad policy of deferring difficult groundwater management decisions. As DEQ recognized in the Draft Special Exception Issuance Fact Sheet, the requested withdrawal is within an aquifer area that has incurred an overall decline.<sup>31</sup> Citizens of Charles City County rely on the stressed Potomac Aquifer for drinking water, and the Commonwealth's Groundwater Management Act mandates the prioritization of human consumption where groundwater is not available for all who desire to use it.<sup>32</sup>

Instead of prioritizing human consumption, though, DEQ has deferred a final decision on the issue for seven years. The upshot of DEQ's deferral is that a billion dollar facility may be constructed and placed into operation on the mere assumption that a different, unrelated project will be completed and placed into operation within the next seven years – New Kent County's proposed surface water intakes and water line.<sup>33</sup> DEQ places far too much weight on the assumption that New Kent County's water intakes and water line will be constructed in seven years. Citizens burdened with the environmental impact of this facility should not have to rely on DEQ's assumptions to protect their drinking water. What does DEQ propose if New Kent ultimately abandons its project or if construction is delayed? Would DEQ be willing to shut down the largest fossil fuel-fired power plant in the Commonwealth seven years from now if New Kent does not construct its intakes system and water line or falls behind schedule? Or would DEQ continue to issue new groundwater withdrawal permits for the power station based on the assumption that there may eventually be an alternative water source? And even if DEQ were willing to require Chickahominy to cease operation, DEQ will still have allowed this non-human consumption withdrawal for seven years. The Water Board should not condone DEQ's decision to postpone serious consideration of these issues. The Water Board should instead deny

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<sup>27</sup> *Friends of Buckingham*, 947 F.3d at 87-89.

<sup>28</sup> *Id.* at 88.

<sup>29</sup> Chickahominy Power Station Draft Special Exception Permit Issuance Fact Sheet 3.

<sup>30</sup> *Id.* at 3, 7.

<sup>31</sup> *Id.* at 3.

<sup>32</sup> Va. Code § 62.1-263.

<sup>33</sup> Chickahominy Power Station Draft Special Exception Permit Issuance Fact Sheet 4.

the groundwater withdrawal special exception permit and require Chickahominy to select an alternative water source for its power plant.

### **III. Request for Public Hearing**

SELC, Concerned Citizens of Charles City County (C5), and Virginia Environmental Justice Collaborative (VEJC) request an additional public hearing for the proposed groundwater withdrawal special exception permit and subsequent environmental justice analysis for the facility, pursuant to 9 Va. Admin. Code §§ 25-230-40(B), 25-610-270(A) and Va. Code § 62.1-44.15.02. In support of such request, SELC, C5, and VEJC make the following statement:

1. The name, mailing address, and telephone number of the requester:

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*On behalf of Southern Environmental Law Center*

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*On behalf of Concerned Citizens of Charles City County*

Queen Zakia Shabazz  
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Richmond, Virginia 23224  
(804) 370-1143

*On behalf of Virginia Environmental Justice Collaborative*

2. The proposed Chickahominy Power Station is a matter of significant public interest, as is the issuance of the proposed special exception permit. The Chickahominy Power Station would be the largest fossil fuel-fired power station in the Commonwealth and as a result has generated significant public controversy. Additionally, the proposed groundwater withdrawal would be from the stressed Potomac Aquifer, which has experienced an overall decline, and upon which Charles City County residents rely for drinking water. Based on the comments provided above, there is substantial dispute regarding whether the Board may issue the requested permit, including due to the inadequacy of DEQ's earlier environmental justice review and determination for the facility. Additionally, a public hearing would not be "inconsistent with, or in violation of, the State Water Control Law, federal law, or any regulation promulgated thereunder."<sup>34</sup> C5, representing citizens of Charles City County who would be burdened by this facility, notes that the power

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<sup>34</sup> Va. Code § 62.1-44.15.02(C)(3).

station would dramatically and permanently reshape, and even endanger, their community. After careful study, C5 discovered that this power station would cause significant air pollution, exploit local water resources, permanently change the county's rural nature, affect roads and public safety, undermine property values, and likely result in a snowballing expansion of pipeline infrastructure in the community. Crucially, residents in Charles City were almost entirely kept out of the initial permitting for the facility; an omission that C5 believes was intentional and strategic. C5 also believes developers intentionally sited this proposed gas plant in a majority-minority community, and believes that this project raises significant environmental justice concerns. C5 first organized in response to this lack of transparency and environmental injustice. A public hearing is necessary to engage Charles City residents who would be most impacted by this plant, and to add a degree of participatory democracy to a process that has, thus far, been cloaked in bureaucratic and institutional silencing.

3. SELC is a non-profit public interest organization dedicated to using the power of the law to protect clean air, clean water, special places, and to ensure a healthy environment for all. C5 is a community grassroots organization that developed in the days immediately following the issuance of the air permit for the Chickahominy Power Station, with the goal of bringing transparency and citizen participation to the important decisions impacting Charles City County. C5 has a central, foundational interest in the groundwater withdrawal special exception permit and Chickahominy Power Station; indeed, the organization was largely developed to communicate local opposition to this fossil fuel project. VEJC is made up of community based non-profits, faith-based, conservation and green organizations, and academics and is dedicated to building a clean, healthy, and just environment for all Virginians and empowering communities to thrive without harmful government interference.

The Chickahominy Power Station would withdraw groundwater from the taxed Potomac Aquifer that Charles City County residents rely on for drinking water and poses significant environmental justice concerns for the citizens of Charles City County. Accordingly, SELC, C5, and VEJC have a demonstrated interest in ensuring the Water Board and DEQ conduct an adequate environmental justice analysis for this permit in order to identify the communities who will be burdened by the facility and consider the potential for disproportionate impacts to economically disadvantaged and minority communities. The public should be meaningfully involved through a public hearing on DEQ's environmental justice analysis for the facility and permit.

4. DEQ's review of this permit is inadequate because it failed to consider environmental justice impacts in accordance with the Virginia Energy Plan. Accordingly, an accurate environmental justice review of the facility and this permit is required to conform to the objectives of the Virginia Energy Plan.

#### **IV. Conclusion**

This permit presents the first opportunity since the Fourth Circuit's decision in *Friends of Buckingham* for DEQ and the Water Board to demonstrate that they are in fact dedicated to ensuring environmental justice in the permitting process for energy facilities. That DEQ's substantially similar analysis for the Buckingham Compressor Station effectively denied the

existence of the Union Hill community cannot be over emphasized. In order to ensure it does not allow such a significant error to reoccur, DEQ must conduct a new environmental justice review for the Chickahominy Power Station. And to ensure the citizens of Charles City County are meaningfully involved and their voices heard, DEQ should provide an additional opportunity for public comment and hearing *after* it conducts a new environmental justice analysis for the facility. This will ensure impacted residents and concerned citizens are able to provide meaningful comments on the potential for disproportionate adverse impacts from development of the facility.

The citizens of Charles City County deserve to be meaningfully involved in the permitting process for the Chickahominy Power Station and deserve the full and fair treatment and consideration envisioned by the Virginia Energy Plan. Because "environmental justice is not merely a box to be checked" we respectfully request that the Board: (1) deny the permit for the Chickahominy Power Station; (2) require additional, reliable information regarding the communities in close proximity to the power station; and (3) consider the potential for disproportionate impacts from issuing a groundwater withdrawal special exception permit. We appreciate your attention to this important matter.

Sincerely,



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OWS Water Withdrawal, rr <withdrawal.permitting@deq.virginia.gov>

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**Comment: Re: Chickahominy Power LLC Application 13800 Coppermine Rd, Ste 115, Herndon, VA 20171 GW0078700**

1 message

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**Barb Adams** <barb5100@comcast.net>  
Reply-To: Barb Adams <barb5100@comcast.net>  
To: withdrawal.permitting@deq.virginia.gov

Fri, Feb 14, 2020 at 11:53 PM

Mr Joe Grist

Office of Water Supply

Virginia Department of Environmental Quality

PO Box 1105

Richmond, VA 23219

14 February 2020

Re: Chickahominy Power LLC Application

13800 Coppermine Rd, Ste 115, Herndon, VA 20171

GW0078700

Dear Mr Grist, Mr Paylor and Members of the Water Control Board:

**Environmental Justice**

I ask that you deny this special exception or postpone the decision until after the DEQ has received requested assessment of the agency's proficiency at operating within Environmental Justice impacts in accordance with the Virginia Energy Plan.

Charles City County, with approximately 48% African American and approximately 6% indigenous demographics and significant numbers of low-income residents, clearly falls within the scope of Environmental Justice concerns. The Special Exception in this application is for a community that depends on water from wells for all the essentials of drinking, bathing cleanliness and hygiene. There could hardly be a more challenging issue to the quality of life and personal well-being. It is not apparent that the DEQ is yet able to discern the factors that should have been and continue to need to be taken into account from an environmental justice and environmental racism perspective. The Virginia Energy Plans states.

*"Virginia is dedicated to ensuring that there are not disproportionate impacts on economically-disadvantaged or minority communities during the siting of energy resources. Ensuring that certain populations are not disproportionately impacted during energy development is critical to environmental justice efforts."*

*"The siting of projects is one aspect of environmental justice, but there are broader environmental justice initiatives percolating and developing within the Commonwealth."*

Does allowing the siting of two massive gas-fired plants, one the largest in the state, in the same county, within one mile of each other, align with the Plan's critical goal to ensure there is not disproportionate impacts on EJ communities? Clearly not.

*From the Governor, "Environmental justice communities – such as areas with large minority populations, those with lower incomes, and indigenous residents – are on the frontlines of climate and environmental change."*

105 *"DEQ's environmental justice study will help ensure the agency's programs benefit all communities, especially those that have historically been the most burdened by pollution."*





*Secretary of Natural Resources, Matthew J. Strickler "These communities and their residents are often the first affected by the negative consequences of environmental impacts, which make existing health and economic disparities even worse. I anticipate this consultant coordinating with the Virginia Council on Environmental Justice to continue to leverage this important work."*

*"In accordance with our mission, DEQ will develop a clear process for incorporating environmental justice principles into our strategic planning and program implementation," said DEQ Director David Paylor. "DEQ will continue to keep the public informed and will engage stakeholders on the results of this important initiative as we move forward."*

Now that the DEQ, under the direction of Governor Northam and Secretary Strickler, is in the process of working with SKEO Solutions and Spectrum Environmental Services to do an Environmental Justice study of the Agency, this permit is a litmus test to see the will behind the words of the Governor, Secretary of Natural Resources, the DEQ and the two citizen Boards .

How can the DEQ, proven to have inadequately taken into account mandated environmental justice factors in the past (US Court of Appeals for the Fourth Circuit; vacated air permit ruling for the Friends of Buckingham) continue any permitting process until their practices and policies are revised and instituted effectively? Only when the above study is completed should the DEQ and Air and Water Boards consider how to properly move forward with any permitting process.

## Notification and Inclusion

I first became aware of the Chickahominy Gas Plant in the spring of 2019. It was brought to the attention of the Richmond chapter of Mothers Out Front that there were two electric plants burning fracked gas slated to be built in Charles City County, VA, one that still had an outstanding DEQ Air Permit. With other members of the group, we were able to mobilize 30 people, all outside of Charles City County, to send comments of concern within the comment period deadline.

106  
Later during the summer, there was a question about whether county residents had any knowledge of the plants. Of course, people that would be directly affected by two fracked gas-fired electric plants, one the 5<sup>th</sup> largest in the US, the largest in VA, would certainly be informed and knowledgeable of what was coming to them! Stirred by this question, I personally canvassed door-to-door to 60 residences within 2 miles of the Chickahominy plant site. Only one of the more than 50 people that I spoke with had ever heard of the plant. One elderly couple whose property bordered the plant had just built a retirement addition to their home - they knew nothing about it.

In talking with residents, many volunteered that they or their elderly relatives or children had significant medical conditions, including cancer, COPD, and asthma. This is anecdotal information, but nevertheless fuels concern that without awareness, information and the opportunity to participate meaningfully in the process, county residents were going to have not one, but two significant sources of pollution adding to their health burden. A comprehensive health impact study is needed to verify the actual potential for harm by the introduction of pollutants and potential change in people's water source. Their environment, with very little industry but a violating landfill, is going to experience significant change to their air, water and land, and they didn't have a clue. Since that time, concerned residents have formed an organization, learned and shared tremendous amounts of very technical information, held numerous well-attended educational meetings and amassed a database of over 300 residents. It proves that with the proper will and intention, it would not have taken much for the county and the DEQ to garner participation and engaged with the community on this very important issue. Notification and inclusion in the process are also factors of environmental justice.

I was not prepared for the level of disrespect, dismissal and disengagement shown by the county officials and the DEQ in the notification, education and inclusion in the process with both gas-fired plants. I discovered that the C4GT 1,060 mw plant had received ALL of its local and state permitting with no community resident involvement! Attending Charles City County Board of Supervisor and other county meetings, it was shocking to witness the restrictive and punitive behaviors by the supervisors and county officials, disallowing discussion and refusing to answer questions. This continues today.

There are a number of simple truths here.

- These two plants will add a significant amount of pollution that will also become some level of water contamination in the plant's operation.
- Residents were not notified effectively, nor informed properly, the minimal standard was inadequate
- The permitting process engaged with the applicant - the polluter - for years before residents were even aware of the possibility of an industry of this magnitude coming to them.
- Charles City County residents were denied the right to speak at a permitting hearing.
- Without effective notification and information, and a process that only really engaged with them after it is mostly complete, people receiving the greatest impact have little hope to affect or determine any change, which makes it a process that serves the polluters and not the people who are affected.

107 If the DEQ and the Water Board are sincere in the intention of protecting the wellbeing and safety of Virginia citizens, especially those with significant challenges you will need to show that in how you address this permit.

## Wastewater Treatment

The water withdrawal from a challenged Potomac Aquifer poses a number of questions concerning water quantity, quality and mitigation in the event either are compromised. Though not directly related, the question of wastewater is essential in looking at any industrial facility, especially the size of the CGP in a county with limited resources. The wastewater from the Chickahominy Gas Plant, confirmed by a number of sources, will be treated at the Roxbury Industrial Center WWTP, 6640 Chamber Road, Charles City, VA. Even though the Draft Special Exception does not specifically address wastewater treatment, it needs to be in the discussion with the removal of groundwater and the calculations of the volume of water that would need to be treated before entering in Virginia's water ways.

The Roxbury Industrial Center WWTP treatment is a lagoon treatment system with treatment capacity of 10,000 gallons/day. The treated waste is released into Possum Run, a tributary of the Chickahominy River, the James River and ultimately the Chesapeake Bay.

There are a number of concerning questions about the CGP's wastewater:

- Investigation, including the EPA's Enforcement and Compliance History Online (ECHO), discovered a long history of violation and non-compliance by all the water and wastewater treatment plants operated by Charles City County, including the Roxbury facility. There is some question of the current permitting status of the Roxbury WWTP because it was missing from the EPA ECHO system. Will the WWTP really be able to operate in a manner necessary for this level of industrial overload?
- Even with evaporation of the expected daily inflow of approximately 80,000 gallons from the aquifer used for evaporative cooling, an additional loading of 2,000 gallons of wastewater/day has the real possibility of overwhelming the plant's treatment process. What percentage of the WWTP is currently in use and will the WWTP be able to effectively treat the increased volume of industrial wastewater without forcing the county, a proven inadequate operator, to build a new treatment plant?
- Chemical pollutants from a gas plant such as the CGP would challenge a treatment facility many times the size and capability of the Roxbury WWTP. These toxic pollutants, even in trace quantities could have a negative effect on any (living) biological treatment process. Does the WWTP have the necessary ability to treat the quantity and variety of chemical pollutants?

- Will Possum Run stream be negatively affected by the increased volume of water and the introduction of untreated or inadequately treated wastewater? Will the size of the receiving stream limit the size of any future, larger wastewater treatment?
- The CGP burned gases, fumes and mists will generate excess hydrocarbons, particulate matter, volatile organic compounds (211 tons of VOCs/year), nitrogen oxides (407 tons of NOX/year) and the heavier components will fall closer to the plant. Trace amounts of hundreds of extremely toxic chemical compounds used in the fracking process, including arsenic, benzene, formaldehyde, lead and mercury will also be emitted. In addition to affecting every living thing in proximity, these will also be able to enter the surface water directly without treatment. This is similar to coal ash, which has been discovered to be a significant source of air-borne arsenic pollution of surface water. Will needed pretreatment of these dangerous pollutants occur at the CGP before entering the county's less than adequate facility? Will the DEQ have the people power and resources to guarantee proper inspection, testing and compliance of the pretreatment system and the inability of the county to keep discharges within permit levels?
- Any reduced ability of treating wastewater effectively would challenge conditions related to the discharges of pollutants into the waters of the United States and the quality standards for surface waters set forth in the Clean Water Act.

Thank you for your time and attention to this and other comments. I look forward to the opportunity to witness the actions of the Water Board to ensure the protection of the citizens you represent.

Barbara Adams

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**Mr Joe Grist.docx**

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**RICHMOND**  
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February 14, 2020

*Via email to:*

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**Re: Draft Groundwater Withdrawal Special Exception Permit for the Chickahominy Power Station (No. GW0078700)**

It is my professional recommendation that the DEQ and State Water Control Board reject the Special Exemption Permit for the Chickahominy Power Station. I have split my remarks into categories and use appendices to provide additional evidence.

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**Appendices**

Appendix 1: Report Submitted to the Air Board on June 13, 2019 (Part 1) and June 20, 2019 (Part 2)  
Appendix 2: Independent Environmental Justice Analysis, Stephen Metts, The New School, June 4, 2019  
Appendix 3: Deficiencies in the DEQ Public Engagement Process, September 13, 2019 comments prepared for the Air Pollution Control Board

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## **Request for a Public Hearing**

The Virginia DEQ and State Water Control Board are receiving hundreds of written public comments about the Chickahominy Power Station case. The Charles City public deserves an immediate halt to all natural gas projects since there are clear deficiencies to the public consultation process; the public also deserves proper hearings for all controversial projects of any kind threatening access to water (see request of the Southern Environmental Law Center). As you hear from members of the Concerned Citizens of Charles City County as well as their technical and legal allies with the Southern Environmental Law Center, the Chesapeake Bay Foundation, and the Sierra Club, please keep in mind that the material evidence presented thus far in this case is merely the tip of the iceberg. I have been researching these gas plants for a full year and I am confident there are significant gaps in the public recording impeding informed decision making. For this reason, there must be a public hearing at the upcoming State Water Control Board meeting in April of 2020 and other forms of investigation as outlined below.

In January of 2019, when I was serving on the Governor's Council on Environmental Justice, it was brought to my attention by Native Virginians in communication with members of the Chickahominy tribe, who were concerned they heard about the gas project only after DEQ announced the project publicly. In my professional opinion, these cases are as problematic as the Buckingham Compressor Station, where the 4<sup>th</sup> Circuit Court found Virginia DEQ and the APCB committed environmental racism and that they did not look adequately at alternatives. The same faulty data gathering methods using aggregated census data and improperly employed the Environmental Protection Agency (EPA) EJSCREEN were used in this Chickahominy gas permitting case. I am confident that if given the attention that the Buckingham Compressor Station air permit process received in the 4<sup>th</sup> Circuit Court, the Chickahominy air permit would also be revoked due to environmental racism.

This Chickahominy Power Station case has the potential to become as controversial as the Buckingham Compressor Station. In my assessment, Virginia DEQ has made dozens of errors violating civil rights protections and the rights of rural, low income populations, who in this instance are predominately African American, Native American and mixed race populations.

## **Water Deficiency**

Balico is requesting to extract up to 82,000 gallons per day of groundwater from the Potomac Aquifer for seven years during a time when recharge in the aquifer is under threat. We are already observing compaction and water over-extraction at concerning levels (see February 14, 2020 comments from Evan Johns of the Appalachian Mountain Advocates). Compaction of aquifer systems due to excessive groundwater use and the resulting groundwater level declines is the single largest cause of subsidence, a severe problem in many parts of Virginia.

DEQ has been aware of excessive pressure on the Potomac Aquifer for years. Nevertheless, the state's water models do not acknowledge the severity of this problem because they do not effectively incorporate climate change impacts and the reductions in water availability in

current and future decades. In 2017, DEQ reduced water allotments for several local and regional businesses. Why put more pressure on this aquifer to produce exported energy (i.e., locally unnecessary)? Local water extracted for this industrial use will create electricity to be exported to the PJM electrical grid servicing consumers living outside of Virginia.

The withdrawal of surface water through the water purchasing contract with New Kent starting in Year 7 adds unnecessary pressure on scarce resources. It is especially imprudent to permit scarce water for exported electricity while financing an expensive desalination plant in nearby James City County to address the water needs of local residential use. DEQ water models do not effectively forecast housing sprawl around Richmond and incorrectly assume that water purchased from New Kent has no other economically important or urgent uses.

Overharvesting groundwater and surface water under situations of declining resources could potentially lead to a situation requiring additional water markets – an argument DEQ has made. There are equity concerns with marketing water resources, since small, local businesses may not have the same access to funding as, for example, an out of state energy company. Precautionary environmental management that rejects unnecessary extraction (i.e., exported electricity) will protect the watershed for residential uses, for agricultural and food production, and for productive local uses by firms rooted in the local community with commitment to the long-term sustainability of our shared resources like clean water.

We uncovered with a Freedom of Information Act request to DEQ that the 7-year timeframe for the Special Exemption Permit came after pressure from Balico, LLC due to pressure from investors. DEQ moved the deadline for use of wells from 5 years to 7 years to appease conditions from financial lenders, thus putting at risk local rights and potentially surpassing ecological limits. An investor's financial horizon should not determine length of access to water. These plants contribute to local water shortages that will be borne by citizens of the Commonwealth, and with low-income populations least likely to have access to scarce resources or to be able meet their basic needs under new water market regimes.

Chickahominy is one of two new gas facilities permitted for Charles City. Both have new water use and also new wastewater discharge. The water impact of these two facilities together was not given enough consideration in this permit – the original plan was to share infrastructure and to consider efficiency between the two facilities, rather than the more wasteful 'go it alone' approach emerging in the past six months. The plans to channel wastewater from the plant to existing sewer lines received inadequate treatment in the Special Exception Permit. The detailed output and destination should be delineated for the life of the plant.

### **Water-Climate Nexus**

The Chickahominy plant emits more than 6.5 million tons of CO<sub>2</sub> annually. On February 7, 2020, representatives of the Water Board and Virginia DEQ told audience members at the Water Permit hearing in Charles City that their 1992 mandate in the Groundwater Management Act, would not consider the pressing climate crisis. State officials tried to tell the public their comments related to climate would not be applicable. This out-of-date position is unacceptable. For more than five years, there has been growing scientific consensus of the need to model and plan for water and climate change in conjunction with the



implications for climate and water cannot be understood one without the other. Here are peer-reviewed research papers that demonstrate that water management and climate change are inextricably linked.

- Fricko, O., Parkinson, S. C., Johnson, N., Strubegger, M., van Vliet, M. T., & Riahi, K. (2016). Energy sector water use implications of a 2 degree C climate policy. *Environmental Research Letters*, 11(3), 034011.
- Frumhoff, P. C., Burkett, V., Jackson, R. B., Newmark, R., Overpeck, J., & Webber, M. (2015). Vulnerabilities and opportunities at the nexus of electricity, water and climate. *Environmental Research Letters*, 10(8), 080201.
- Gerlak, A. K., Weston, J., McMahan, B., Murray, R. L., & Mills-Novoa, M. (2018). Climate risk management and the electricity sector. *Climate Risk Management*, 19, 12-22.
- Pan, S. Y., Snyder, S. W., Packman, A. I., Lin, Y. J., & Chiang, P. C. (2018). Cooling water use in thermoelectric power generation and its associated challenges for addressing water-energy nexus. *Water-Energy Nexus*, 1(1), 26-41.
- Williams, J., Bouzarovski, S., & Swyngedouw, E. (2019). The urban resource nexus: On the politics of relationality, water-energy infrastructure and the fallacy of integration. *Environment and Planning C: Politics and Space*, 37(4), 652-669.
- Zhou, Q., Hanasaki, N., Fujimori, S., Yoshikawa, S., Kanae, S., & Okadera, T. (2018). Cooling water sufficiency in a warming world: Projection using an integrated assessment model and a global hydrological model. *Water*, 10(7), 872.

### Environmental Justice

According to the independent review from Stephen Metts of the New School (See Appendix 2), the direct vicinity of the gas plant is majority-minority with some portions of the census tract within 2 miles of the plant hosting households which are 65%+ people of color. The direct area surrounding the plant is approximately 45% African American. Nevertheless, enhanced review required with environmental justice populations did not occur for the first 2.5 years of this permitting process in direct violation of basic premise of 'meaningful participation.' For example, following inadequate notification of the project, the Air Board and Virginia DEQ did not allow 12 county residents to speak during the Air Permit hearing on June 21, 2019. That board vote was rushed in one meeting after board members were granted insufficient information from DEQ to make the decision about site suitability. Air Board members were threatened at the start of the meeting that if they did not issue a decision that same day on June 21, they would be violating the law.

After pointing out multiple flaws in the public notification process – all of this documented in detail on the transcript – the board voted 5-1 to approve the project regardless. This was the most flawed US permitting process I have observed in decades of doing this work. A small 'concession' to the citizen board members who had their arms inappropriately twisted by state legal counsel (and Balico who refused to allow any more time, although they could have) to make a same day decision on a highly controversial and problematic case, was to create a sub-committee to evaluate the failure of DEQ's public consultation procedures. When I heard Air Board members of this sub-committee speak about their charge on September 13, each admitted significant failures with the Chickahominy process. Instead of re-writing concerns I shared with the Air Board on September 13th – none of which have

been addressed - I attach them here (Appendix 3) since the Chickahominy project contained each problem.

DEQ is currently under assessment by the national consulting firm SKEO specifically with regard to environmental injustice. This is due in part due to the violations of rights of minority populations with recent permits, including with the air permit for the Chickahominy Power Station. We have not heard the results of this investigation and it would be imprudent for Virginia DEQ to issue a decision on this case while this investigation remains open, another reason my professional recommendation is to request an immediate moratorium to gas infrastructure construction in Charles City. The fact that the high voltage Skiffes Creek transmission line, which led to the creation of the expansion of the Dominion Substations making possible these gas plants in the first place, has also been sent back to the Army Corp of Engineers to redo environmental impact assessment, is telling that there has never been adequate assessment of this infrastructure buildout.

The 4th Circuit Court found racial discrimination in DEQ and the Air Board's methods used to determine the air permit in the case of Buckingham Compressor Station. These same methods (aggregated census data, use of EPA's EJSCREEN, and insufficient attention to alternatives) were also used in the Chickahominy power plant air permit process. These methods were found by a federal court to be deficient.

Free, Prior, and Informed Consent (FPIC), the international standard for agreements with indigenous nations, did not occur in this case (see Appendix 1 for specific details). The Chickahominy were undergoing federal recognition when Balico contacted the tribal leaders. The settlement of millions of dollars for damages from the Skiffes Creek Transmission line and the expanded Dominion Energy substation associated with this project at the same point as consulting on this plant are problematic for legal and ethical reasons.

DEQ has a poor record of accomplishment of work in Charles City and the permitting process for this gas plant is another example of the DEQ's inability to work effectively with communities of color. In this permitting process, DEQ privileged the acts of a Native American chief while ignoring (and even silencing at the Air Board meeting on June 21, 2019) those local leaders trying to articulate the concerns of hundreds of African Americans and mixed race populations, who were not granted the same voice or representation.

### **Lack of Transparency**

This case requires full legal investigation at many levels and the FBI has been asked to intervene by a local Charles City County resident on related property cases. I have documented overwhelming evidence of misuse of power in the local government. As a single example, I have filed a number of FOIA requests with the county government, and have had difficulty on many occasions receiving the requested information. My latest request was due this past Monday and was promised by the end of business today, but remains unfulfilled. I have previously experienced delays and impediments when requesting information from the County Administrator. When I did not receive information I needed before the Air Board hearing in June of 2019, I put in complaints with the Commonwealth's FOIA oversight body. My experience is not unique. Local residents have also reported that Michelle Johnson does not release information requested in FOIAs in a timely manner, and sometimes does not

release information at all. These impediments to accessing information add to distrust and confusion with the host community.

Essential information was redacted from the State Corporation Commission application and this has made it impossible to make informed decisions. I covered these concerns in detail in a prior report to the Air Board (Appendix 1). I wrote this in June of 2019 in the weeks before the Air Board hearing because I realized materials compiled from Virginia DEQ for the Air Board were incomplete and missing essential information. I am filling these same comments again here because they were never given due consideration and continue to be relevant to my recommendation to place an immediate moratorium on both Charles City gas plants.

### **Regulatory Segmentation and Shifting Plans**

Each water impact is broken into small permit segments (unlike nature which flows and is connected) to suggest impacts overall are minimal. This is again a false narrative being put forth by DEQ when the impacts are cumulative and according to full lifecycle assessment actually considerably larger and more extensive. The same type of permit segmentation masks the full climate impact of the project. The gas industry falsely claims that the climate impacts of gas are less than coal. This façade stems from only measuring select emissions at the point of combustion and is reliant on a broken regulatory system that 1) creates fake segments to break major impacts into smaller ones that no one adds back together to show full impact, and 2) that does not regulate methane or methane leaks across the lifecycle.

With the second gas plant in Charles City, C4GT, we found out after the air and water permit were already approved about a supply enhancement project requiring 30 miles of new pipelines, one new compressor station, and two expanded compressor stations. As of yet we do not know if there will be a subsequent proposal for gas supply with this Chickahominy plant. Information received during prior stages of this permit application must be considered faulty as the situation has continued to unfold from week to week and month to month. There is a constant sense that both the permit application and DEQ officials are "winging it."

For example, the air permit paperwork initially showed there would be connection to the existing Virginia Natural Gas. We have since learned this gas is already subscribed and VNG did not confirm this supply to Chickahominy when recently asked. The earlier air application also said there would be water piped from the James River, which changed in this current plan. At the time of writing, there is a lack of confidence regarding proposed steps as these seem highly fluid and contingent.

It appears likely the complete water impacts are not covered in this permit and not even DEQ knows or records what these might become. Nonetheless, with this Special Exception Permit language DEQ staff inaccurately suggest that they understand the full water impact. This misleads the public by creating a false 'sustainable management' narrative, which DEQ reinforced with glossy diagrams and displays, even if these contain only partial and artificially segmented implications.

The following questions remain:

1. What other water impacts are coming from associated infrastructure about which we have not been informed?
2. What does DEQ know about these next steps that have not been released to the public, or are our state agencies also in the dark?
3. Who is the company behind this gas plant and how does it fit to their other infrastructure buildout in our state?

#### **Lack of Publicly Available Information**

There has been active attempts from the local and state government to reduce or limit public access to necessary information and avenues to participate in the process. As such, we are missing necessary information on the following topics, among others, in order to make informed decisions. The Commonwealth of Virginia should not be permitting this plant before also reviewing the following to assure the resilience, safety and health of the local community.

- 1) The cost to Charles Citizen County taxpayers and to energy ratepayers for the infrastructure associated with this gas plant remains unclear. Citizens have asked the county government for this information repeatedly.
  - a. The Board of Supervisors is now promising this information, but after this comment deadline.
  - b. There have been a number of incentives promised to Balico, LLC that may not be feasible. There has not been a project budget or design mockup made available to the public to all discussions of impacts cannot be considered adequate informed.
- 2) Where is the Comprehensive and Cumulative Risk Assessment?
  - a. The project assessments as undertaken are missing important information on the challenges to citizen safety in this local environment with poor telecommunication infrastructure (internet and cell phone).
  - b. Evacuation and emergency management routes and plans are poorly studied thus far and there are a number of constraints putting vulnerable populations at risk.
- 3) Where is the Comprehensive and Cumulative Health Impact Assessment?

The rates of vulnerability among local populations are recorded as high from 2010 census data (i.e., based on race, poverty, health care coverage, access to insurance, education level, etc) with these patterns remaining consistent in the more recent American Community Survey data.

  - a. There appears to be a high rate of pre-existing health conditions including but not limited to asthma, COPD, heart disease, and cancer. I am currently working with local faith organizations to investigate through spatial data the possibility of a cancer cluster based on the increasing number of funeral services documented in local churches.
    - i. There is an apparent cluster of illnesses including cancer in the area of the landfill and the Roxbury industrial corridor.

- ii. According to our investigations, state agencies have not yet studied to see if a pattern exists at this local scale.
  - b. The data we need from the federal database ToxNet was recently removed from public web access, making state and local level research even more important.
- 4) The Charles City County government does not have the personnel to assure proper planning and execution of these large projects. They are relying on short term contracts and consultants.
- a. Basic planning components appear to be falling through the cracks.
  - b. There is a sense of chaos and confusion in meetings involving the local government. Concerned Citizens of Charles City County tries to have representatives at every local meeting because topics related to the gas plants pop up unexpectedly without being on the agenda. Agendas are often released to the public late or changed after notification making it difficult to follow the governance and implementation of these projects.
- 5) The Charles City County landfills have been out of compliance and there is an open DEQ Notice of Violation (NOV) case. The county government needs to answer questions about how they have improved their oversight and compliance mechanisms before county residents could feel assured these gas plants will be adequately monitored. I constantly hear this issue raised in Charles City County.
- a. The county government admits publicly that land violations are their fault, as I have witnessed in several meetings. However, the constant mish mash of information and ongoing demonstration of poor governance does not suggest that those at the head of the county government are prepared to main the landfill properly much less add 3,000 MW of additional gas facilities.
  - b. C4GT, the permitted 1,050 MW gas plant in Charles City, has not secured final finance or gas supply. The fact that the C4GT plant received permission from county and state governments without water infrastructure, gas supply or proof of financial support demonstrates the plants in Charles City have been given inadequate review thus far.
  - c. At the time of writing, the sPower solar facility in Charles City County is currently in limbo because the required minimum the county government promised in terms of property access is short. This current situation may eventually be resolved, and may reflect inexperience, but is yet another example of the local government not being able to fulfill its obligations. The difference with the gas plants is that they are large and potentially highly dangerous facilities. The risk is high because of the involvement of merchant plants. The poor oversight and lack of experience with solar and gas at the county level increases potential risk.
- 6) There has not been any study done on the potential impacts for real estate and local property values.
- a. Economic repercussions are a core component of site suitability in the Air Board mandate and should have been part of their June 21, 2019 decision. The

fact that economic impacts have not been studied, and were not considered, demonstrates this has been a rushed process.

- 7) There has been little attention to the suitability to this historic area.
  - a. There is likely competition with and harm to tourism revenue from the bike path, James River plantations and other historical, cultural and ecological sites.

### **Hostile Treatment of Concerned Citizens**

Media response agencies and consulting firms are advising the local government and communication to DEQ suggesting that there has been inappropriate behavior on the part of citizens asking for more information, disseminating data, and publicly requesting to be part of the process. I have received documents in FOIAs where audience behaviors in Charles City were described as unruly. The problematic activities were things I had done unintentionally, such as squatting temporarily in the aisle of a hearing (i.e., to take a photo while not wanting to block line of site of others in the room). This was the type of behavior I did and that I saw a reporter from the RTD do – both of us were warned and we moved quickly to a seat - that was later linked to the “opposition.” It is inappropriate to label citizens negatively or to imply that well behaved and respectful audience members were doing anything wrong.

As I use FOIA to access state documents about concerned citizen groups, I frequently observe inflammatory or derogatory terms used for scientists, parents and residents, who are concerned about the processes used to permit these plants in Charles City and their grave consequences. Virginian residents should be heard rather than silenced when they express legitimate concerns about access to water or about emissions contributing to the worsening of local air quality. Local voices have not been adequately heard: the role of DEQ in Charles City, particularly 2015- 2019 before deficiencies were made public at the June 21, 2019 Air Board hearing, has compounded the problems existing in the county rather than assured any resolution or improvement on these pre-existing government failures.

As an environmental professional with expertise in sustainable energy, my recommendation is to reject this Special Exception water permit. There should be a moratorium of gas construction on Charles City until there can be a full civil rights investigation targeting but not limited to environmental racism and restrictions to citizen consultation and participation.

Sincerely,



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# Appendix One

## Chickahominy Power Permitting

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Department of Geography and the Environment  
Environmental Studies Program  
University of Richmond

Independent analysis submitted to  
Virginia's *Air Pollution Control Board* members  
on June 12, 2019 (Part One)  
and June 20, 2019 (Part Two)

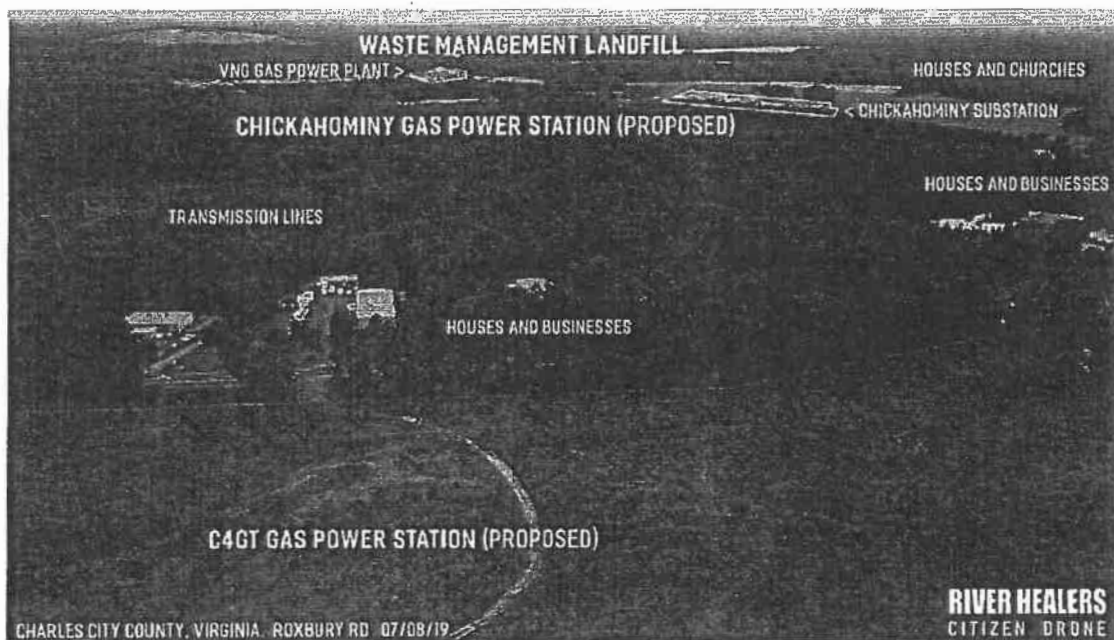


Image Credit: Thomas Burkett, Virginia Commonwealth University

Balico LLC/Chickahominy Power facility located at the east side of State Road 106 (Roxbury Rd), along Chambers/Landfill Road, Charles City, Virginia

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## Report Summary

- Existing deficiencies in Virginia's Department of Environmental Quality (DEQ) review of Chickahominy Power risk public health and safety. *Scholarly articles in Appendix 1 tie exposures from gas infrastructure to public health risks.*
- The Air Pollution Control Board (APCB) must conduct rigorous review and demand social and ecological safeguards to end discrimination and protect vulnerable populations.
- Civil rights violations occurred when DEQ drafted a permit ignoring thresholds requiring enhanced environmental justice review. The draft permit as written allows toxic emissions to cause disproportionate impacts to vulnerable populations.
- A culturally insensitive process lacking historical context allowed for discriminatory harm based on race and ethnicity.
- There was violation of Free Prior and Informed Consent (FPIC) of Chickahominy tribal members: gas plant negotiation occurred with tribal leaders at the same time as the final rounds of a long, sensitive review process for federal recognition.
- There has been incomplete public consultation during the DEQ process; *a new public comment period covering the full APCB mandate must occur.*
- There was inadequate transparency following redaction of key information,<sup>1</sup> such as investors, equipment, and gas supply, during the State Corporation Commission (SCC) review.<sup>2</sup> Even the estimated cost of the large gas plant is confidential<sup>3</sup> - a 1,600 MW plant in Greensboro, Virginia cost approximately \$1.3 billion dollars so significant investment is required for this scale project.

## National and Global Importance

Chickahominy Power would be the largest gas plant in the state and one of the largest in the US.<sup>4</sup> There are only 4 places in the US with 2,500+ MW of gas in 1 mile. Chickahominy and C4GT bring together 2,700 MW in 1.1 mile. Other places with such intensity are urban (i.e., New York, Los Angeles); however, Charles City's selection ties to the expanded Dominion Energy substation and the Virginia Natural Gas pipeline.<sup>5</sup>

The Chickahominy Gas Plant would be a major source of air pollution. Of 10 proposed emission constituents, 7 are above the threshold to classify a facility as a major stationary source of the pollutant, including 3 types of particulate matter (PM), nitrogen oxide (NO), carbon monoxide (CO), volatile organic compounds (VOCs) and carbon dioxide equivalents (CO<sub>2</sub>e) (Table 1 on the next page).<sup>6</sup> For more details, see the Air Permit Application.<sup>7</sup>

<sup>1</sup> See SCC protective ruling <http://www.scc.virginia.gov/docketsearch/DOCS/3hnb011.PDF>.

<sup>2</sup> <http://www.scc.virginia.gov/docketsearch/DOCS/3h6d011.PDF>.

<sup>3</sup> <http://www.scc.virginia.gov/docketsearch/DOCS/3ks3011.PDF>, pg. 6.

<sup>4</sup> [https://spatial-analysis-findings.s3.us-east-](https://spatial-analysis-findings.s3.us-east-2.amazonaws.com/Independent+spatial+data+analyses+of+the+2019+Chickahominy+Power+Plant_6-4-19.pdf)

[2.amazonaws.com/Independent+spatial+data+analyses+of+the+2019+Chickahominy+Power+Plant\\_6-4-19.pdf](https://spatial-analysis-findings.s3.us-east-2.amazonaws.com/Independent+spatial+data+analyses+of+the+2019+Chickahominy+Power+Plant_6-4-19.pdf).

<sup>5</sup> Gas would likely come on the Virginia Natural Gas pipeline with potential interceptions with Columbia Gas, Transco, and Atlantic Coast Pipeline, see <https://www.ferc.gov/industries/gas/enviro/eis/2017/07-21-17-FEIS/volume-1.pdf>. Exact gas supply from interstate and/or intrastate pipelines remains confidential.

<sup>6</sup> <http://www.frackcheckwv.net/2019/03/20/proposed-chickahomney-power-plant-would-use-natural-gas-in-charles-city-va/>.

<sup>7</sup> [https://www.deq.virginia.gov/Portals/0/DEQ/Air/Chickahominy\\_Power\\_Plant/Documents/application\\_for\\_Chickahominy\\_Power\\_Plant\\_52610.pdf](https://www.deq.virginia.gov/Portals/0/DEQ/Air/Chickahominy_Power_Plant/Documents/application_for_Chickahominy_Power_Plant_52610.pdf).

**Table 1: Chickahominy Power's annual pollution allotment in DEQ Draft Permit<sup>8</sup>**

Pollutant	Emissions (tons/yr)
NO <sub>x</sub>	407
CO	323
SO <sub>2</sub>	62
VOC	211
PM (filterable only)	169
PM <sub>10</sub>	169
PM <sub>2.5</sub>	169
CO <sub>2</sub> e	6,479,692
Sulfuric acid mist (H <sub>2</sub> SO <sub>4</sub> )	65
Acrolein	0.23
Formaldehyde	9.86
Beryllium	0.00064
Cadmium	0.059
Chromium	0.075
Lead	0.027
Mercury	0.014
Nickel	0.12

Flaws in this permitting process described in this report (Parts 1 and 2) would create poor national precedent. The Virginian process depicts an institutionalized lack of due diligence in environmental justice evaluation since 2015 for C4GT (the C4GT pipeline is covered in the Chickahominy Environmental Impact Assessment - EIA) and since 2017 for Chickahominy Power. The APCB cannot approve the Chickahominy permit with blatant civil rights violations as it would threaten public health. This APCB decision has implications beyond this case.

Releases of 6,479,692 tons of CO<sub>2</sub>e annually are significant at a global level: Chickahominy Power's permit exemplifies Business As Usual (BAU) at a time when scientists with the Intergovernmental Panel on Climate Change (IPCC) implore we cut greenhouse gas emissions by at least a third in the near future.<sup>9</sup> Virginian concerns about climate change and opposition to the release of more than six million tons of CO<sub>2</sub>e by this gas plant annually are prominent in public comments.<sup>10</sup> All air permits help Virginia mitigate the crisis of recurrent flooding tied to sea level rise experienced throughout the Commonwealth's eastern shore, Tidewater, and Hampton Roads. The rising frequency and intensity of disasters like hurricanes, tropical storms, and flooding demonstrates injustice because negative impacts disproportionately harm economically vulnerable populations unable to recover from additional hardship. A buzzword for Virginian institutions is 'resiliency' and funding for this work is available to state agencies and academic institutions, although support is harder to come by for the frontline communities who assume daily climate risk and damage daily.

Across their full lifecycle, gas facilities like Chickahominy Power are massive contributors to climate change. Identification of root causes of climate change remains absent from most conversations I have witnessed within and among Virginian state agencies over the past decade. Fossil fuel expansion undercuts and steals resources from renewable and alternative sources as well as initiatives to actualize our potential for energy efficiency and energy conservation.

<sup>8</sup> [https://www.deq.virginia.gov/Portals/0/DEQ/Air/Chickahominy\\_Power\\_Plant/Documents/52610-001\\_2019\\_DRAFT\\_engineering\\_analysis\\_revised\\_for\\_board.pdf](https://www.deq.virginia.gov/Portals/0/DEQ/Air/Chickahominy_Power_Plant/Documents/52610-001_2019_DRAFT_engineering_analysis_revised_for_board.pdf); table does not report methane releases through plant emissions and leaks.

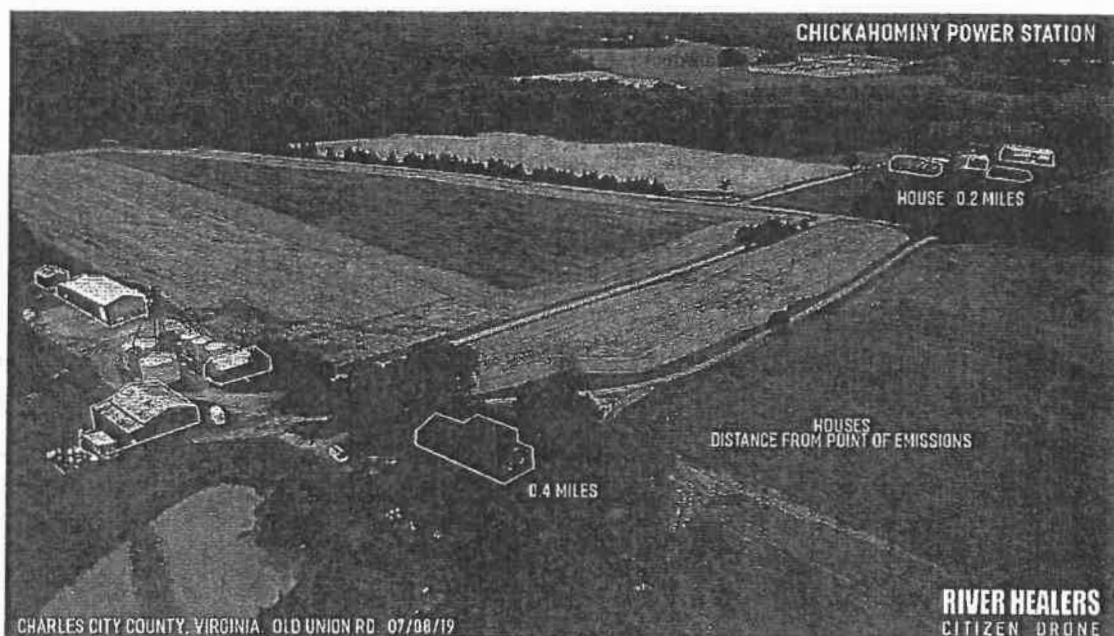
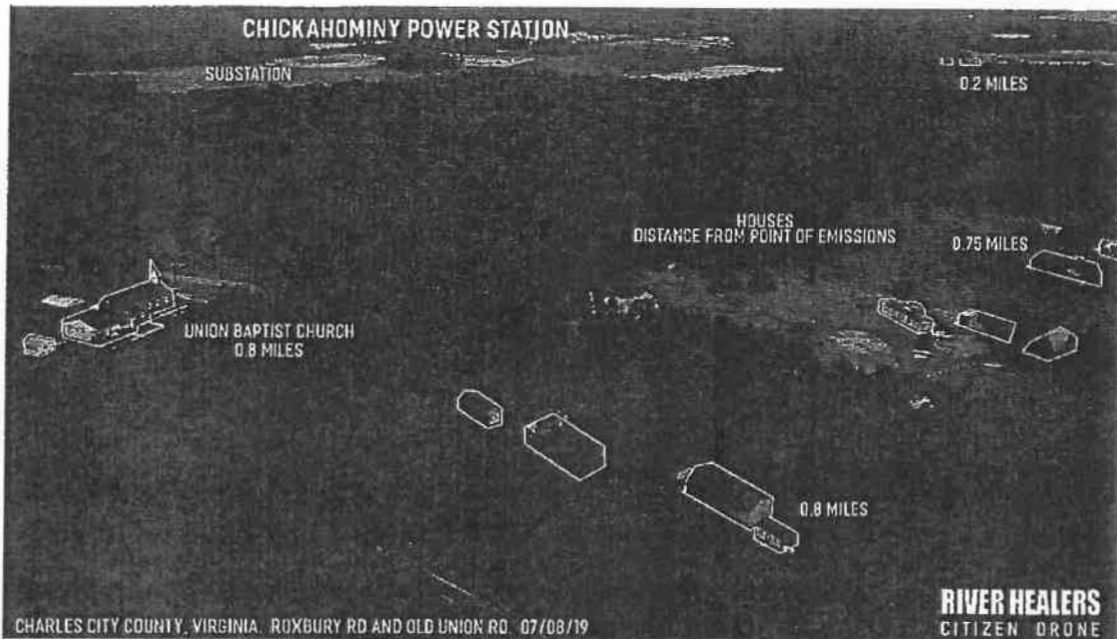
<sup>9</sup> <https://www.ipcc.ch/sr15/chapter/summary-for-policy-makers/>.

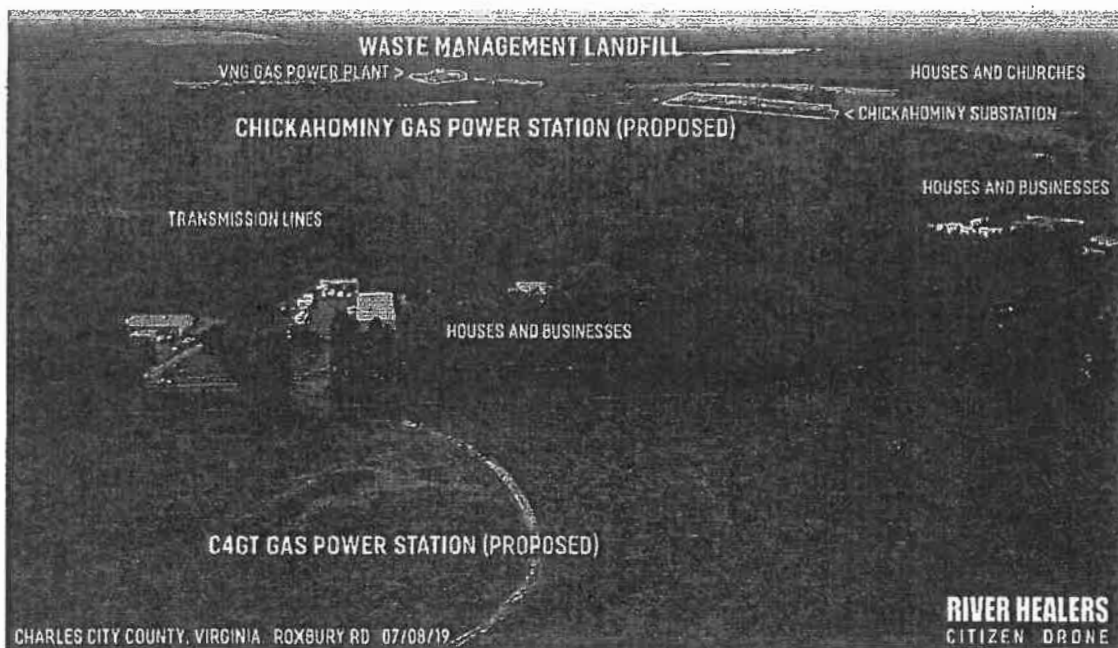
<sup>10</sup> <https://www.deq.virginia.gov/Programs/Air/ChickahominyPowerPlant.aspx>.

## Site Suitability

It must be difficult to make decisions about site suitability without visiting the area first. Figures 1-3 provide a general sense of place as captured by drone.

**Figures 1-3: Drone Footage at Chickahominy Power Site**  
(Image Credits: Thomas Burkett, Virginia Commonwealth University)





### Technical Deficiencies

In independent analysis Stephen Metts of The New School examples modeling protocol found in the public record for this project and “highlights the absence of any meaningful discussion, mapping or quantification of combined and localized emissions from both the C4GT facility and the Chickahominy plant. In light of this application deficiency, there is no method by which to gauge potential adverse and disproportionate air quality impacts on EJ eligible populations in close proximity to the combined projects. As such, the current application is deficient in both informing and protecting the public.”<sup>11</sup>

Analysis for best available control technology (BACT) is ineffective because Balico, LLC picked the higher emitting of two options (Table 2 on the next page) from their earlier air permit application. With the revised application now, it is easy to overlook the fact that the select option releases more toxic pollutants. Company media releases created a positive spin but the Mitsubishi turbine is worse in most categories of dangerous emissions and cannot legitimately be called BACT. For example, every year the gas plant could produce 700,344 tons more CO<sub>2</sub>e than if Balico, LLC picked Option 1.

<sup>11</sup> <https://gist.github.com/VzPI/96d56d480fe1ca84820d53919a87058f>

Table 2 - Expected emissions from the proposed facility are as follows:

Pollutant	Option 1: GE Emissions (tons/yr)	Option 2: MHPS Emissions (tons/yr)
NO <sub>x</sub>	368	407
CO	398	323
SO <sub>2</sub>	54	62
VOC	74	211
PM (filterable only)	168	169
PM <sub>10</sub>	168	169
PM <sub>2.5</sub>	168	169
CO <sub>2e</sub>	5,779,348	6,479,692
Sulfuric acid mist (H <sub>2</sub> SO <sub>4</sub> )	37	65
Acrolein	0.20	0.23
Formaldehyde	8.81	9.86
Beryllium	0.00058	0.00064
Cadmium	0.053	0.059
Chromium	0.067	0.075
Lead	0.024	0.027
Mercury	0.013	0.014
Nickel	0.10	0.12

DEQ air permit staff in March 5 Q & A in Charles City County suggest not to include information in comments unless it is technical and directly related to air emissions. Otherwise, it won't be considered relevant. Yet these same comments go in front of APCB, whose mandate is more holistic and integral. I have witnessed numerous Air Permit staff in different locations (Charles City County, Richmond, Buckingham County) giving the public this same information across multiple years, suggesting it is institutionalized. If these cases later end up in front of the Air Board, DEQ has intentionally limited the scope of input. For this reason, APCB now needs to reopen public comment and have commenter speak to the scope of the four areas (Figure 4) covered by this citizen body that predates and extends beyond the narrow DEQ air permit process.

Figure 4: The Four Duties of the Air Pollution Control Board<sup>12</sup>

The Board in making regulations and in approving variances, control programs, or permits, and the courts in granting injunctive relief under the provisions of this chapter, shall consider facts and circumstances relevant to the reasonableness of the activity involved and the regulations proposed to control it, including:

1. The character and degree of injury to, or interference with, safety, health, or the reasonable use of property which is caused or threatened to be caused;
2. The social and economic value of the activity involved;
3. The suitability of the activity to the area in which it is located; and
4. The scientific and economic practicality of reducing or eliminating the discharge resulting from such activity.

#### Tribal Recognition Requires New Process

With federal recognition, Virginian tribes have an opportunity and responsibility to work with federal agencies to build capacity to assume new roles. DEQ is going to need to learn co-

<sup>12</sup> <https://law.lis.virginia.gov/vacode/title10.1/chapter13/section10.1-1307/>

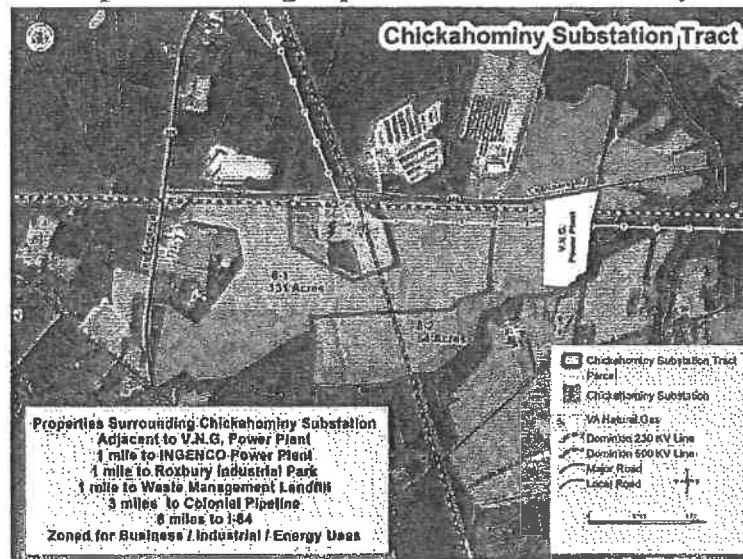
management practices. State agencies throughout the government have never redressed harm from institutionalized racism or acknowledged long-term consequences. For example, as the Chickahominy note on their website, tribal members could not receive higher education until the 1960s.<sup>13</sup> Educational gaps created by these historical policies that were discriminatory continue today. These long-standing patterns are built into how Virginia governs.

DEQ also needs to improve consultation practices with state recognized tribes. For example, although not federal recognition like dozens of remaining tribes, exemplary public health and environmental management work done by a Lumbee Advisory Panel in North Carolina. Collaboration in a team of community members and Lumbee professionals so the research methods and findings demonstrate cultural sensitivities and the researchers employ rigorous participatory approaches to science.<sup>14</sup>

It is imperative that before an air permits like this occur a comprehensive health impact assessment (HIA) occurs with tribal leaders and members along with independent professionals including Native American and African American scholars, public historians, and legal advocates, public health practitioners, and environmental management experts. Residents near the plant need access to information and communication with impacted populated who live next to similar facilities. Residents should visit another 1,600+ MW sized facility in order guide Balico, LLC and state agencies to establish exposure and risk assessments and response and mitigation strategies for emergency situation in rural area with limited infrastructure.

This DEQ permitting process provides a window of opportunity to start to respect independent Native American institutions while also recognizing and addressing gaps in technical proficiency created and replicated across 400 years of oppression and exploitation. There needs to be public and private accountability in a transparent co-management process. If this cannot occur, it is not an appropriate time for Balico, LLC to seek a permit within two miles from tribal headquarters and proximate to where the majority of Chickahominy live. As shown in Map 1 below, DEQ and other agencies need to examine comprehensive, cumulative exposures.

**Map 1: Multiple Intersecting Exposures near Chickahominy Substation**



<sup>13</sup> <http://www.chickahominytribe.org/History/20thCentury.html>

<sup>14</sup> [https://www.dropbox.com/s/9irxj2zabmw7t4m/AdvisoryPanelReport\\_v6.pdf?dl=0](https://www.dropbox.com/s/9irxj2zabmw7t4m/AdvisoryPanelReport_v6.pdf?dl=0)

## PART II

### Chickahominy Power Permitting -- Pending Questions

#### Report Part II Summary

Virginia's Air Pollution Control Board (APCB) cannot make a final decision about Chickahominy Power Station on June 21 because of missing information regarding how the gas plant influences factors under the purview of the APCB. For example, the materials provided from the State Corporation Commission (SCC) redacts core information APCB members need to determine economic development implications and potential repercussions for property per their mandate.<sup>15</sup> Virginia Department of Environmental Quality (DEQ) materials present an incomplete picture and are particularly inadequate in analysis of environmental justice. This report focuses on a few of many unanswered questions about the project and provides documented evidence with screenshots and links to full documents demonstrating some of the various concerns the APCB will need to examine further to assure a rigorous process. Evidence in Part II of this report follows from Part I submitted to the Air Board on June 12, 2019 and an independent report of Stephen Metts from The New School received the day prior.<sup>16</sup>

- The Chickahominy Power Station permitting process demonstrates a concerning lack of transparency originating from the Protective Order under the State Corporation Commission (SCC): DEQ and the county Board of Supervisors (BOS) did not have basic information about the cost of the plant or the financing behind it.<sup>17</sup> The APCB needs more information to complete its required procedural assessment of economic value and property impacts.
- Records suggest DEQ (and the environmental consultants at AECOM preparing the permit application) helped Balico, LLC complete an application after regulatory missteps in 2017 and inadequate communication in 2018.<sup>18</sup> While the work of DEQ and AECOM is evident in the current application, Balico, LLC has yet to demonstrate its capacity to run the largest gas plant in the state.
- Balico, LLC may have inflated promises to Charles City County officials. The request for an incentive package in 2018 changed economic equations in ways the SCC did not review and deserve consideration.
- Charles City County residents were not aware of the gas plant permits during DEQ's public comment period and so a public comment period must reopen.<sup>19</sup>

<sup>15</sup> The duties of the APCB are to address 1) The character and degree of injury to, or interference with, safety, health, or the reasonable use of property which is caused or threatened to be caused; 2) The social and economic value of the activity involved; 3) The suitability of the activity to the area in which it is located; and 4) The scientific and economic practicality of reducing or eliminating the discharge resulting from such activity <https://law.lis.virginia.gov/vacode/title10.1/chapter13/section10.1-1307/>.

<sup>16</sup> [https://spatial-analysis-findings.s3.us-east-](https://spatial-analysis-findings.s3.us-east-2.amazonaws.com/Independent+spatial+data+analyses+of+the+2019+Chickahominy+Power+Plant_6-4-19.pdf)

[2.amazonaws.com/Independent+spatial+data+analyses+of+the+2019+Chickahominy+Power+Plant\\_6-4-19.pdf](https://spatial-analysis-findings.s3.us-east-2.amazonaws.com/Independent+spatial+data+analyses+of+the+2019+Chickahominy+Power+Plant_6-4-19.pdf).

<sup>17</sup> According to documents released under the Freedom of Information Act (FOIA) and answers from the FOIA staff I contacted in June of 2019, it seems DEQ and county officials had electronic files without the disc of confidential information.

<sup>18</sup> [https://drive.google.com/file/d/1V-M6POaZ0CRc\\_cGbQIBNmAVOPqZp40wf/view?usp=sharing](https://drive.google.com/file/d/1V-M6POaZ0CRc_cGbQIBNmAVOPqZp40wf/view?usp=sharing).

<sup>19</sup> Current reports of Charles City County populations come from June 2019 personal communications about residential canvassing and outreach to churches and community institutions by River Healers, Mothers Out Front, Southeast CARE Coalition, Food and Water Watch, Sierra Club, Virginia Environmental Justice



### Lack of Transparency

There are trade secrets in industry. Yet with the 2017 SCC Protective Ruling,<sup>20</sup> the amount of basic information missing from this case file is excessive. How much does the plant actually cost (**Figure 1**)? Why would this price tag be so sensitive that the state, county, and tribal governments cannot know? Should professionals have to place their reputation on the line without information?

**Figure 1: SCC Application – Plant Cost for Chickahominy Power<sup>21</sup>**

CPLLC asks that the Commission waive any requirement to provide cost-related information or, alternatively, that cost-related information be treated as Confidential and Extraordinarily Sensitive Information. Without waiving its request to forego providing cost-related information, CPLLC anticipates the cost of the Facility to be approximately [BEGIN CONFIDENTIAL] [END CONFIDENTIAL].

The APCB does not know where Chickahominy Power investment comes and lacks assurances regarding credit, loan arrangements, and financial networks (**Figure 2**) exposing the citizens of Charles City County, and the residents of Virginia more broadly, to financial risk.

**Figure 2: SCC Application -- Finance Information for Chickahominy Power<sup>22</sup>**

Development of the Facility will be financed by Chickahominy Partners, LLC ("Chickahominy Partners"), a Virginia Limited Liability Company formed in 2016 to lead investment activities associated with the Facility. Development of the Facility is also supported by [BEGIN CONFIDENTIAL] [REDACTED]

[REDACTED]

[REDACTED] [END CONFIDENTIAL]. CP LLC's contracts, affiliation and relationships with Chickahominy Partners, Balico and other entities provide the Company with the expertise, experience and resources to ensure successful completion of the Facility.

From where does the gas come? The SCC application states there are “no incremental interstate natural gas pipelines currently related to the facility; however...” (Figure 3). Does the “however” refer to “currently,” “incremental,” “interstate” or something else?

**Figure 3: SCC Application Gas Information for Chickahominy Power**

Collaborative, and others. Field reports were consistent: while some county residents had heard of the 340 MW sPower solar farm recently permitted in Charles City, they were seldom aware of either gas plant.

<sup>20</sup> <http://www.scc.virginia.gov/docketsearch/DOCS/3hnb011.PDF>, p. 5.

<sup>21</sup> <http://www.scc.virginia.gov/docketsearch/DOCS/3h6d011.PDF>, p. 29.

<sup>22</sup> <http://www.scc.virginia.gov/docketsearch/DOCS/3h6d01!.PDF>, p. 9.



fuel supply arrangement for the Facility is included in § 9 of Exhibit 1.

The public does not know exact project personnel and cannot name the “independent power company” for which they work (Figure 4). We have a partial snapshot of a few eclectic Balico, LLC representatives.<sup>23</sup> In Figure 4, it is not clear what “retained the services” means in the context of managing the daily operations of the power plant. As such, there is not enough information to provide assurances to the APCB of effective operation of a project of this scale.

CPLIC is a special-purpose entity organized for the purpose of developing, constructing and operating the proposed Facility. As indicated, above and discussed in Exhibit 1, Balico has an extensive history of providing energy management and energy infrastructure development services to industrial, commercial and utility company clients in locations throughout the United States and across the world. Balico's Managing Partner has been involved in independent power projects since 1984 and the company has retained the services of numerous individuals, formerly associated with a major independent power company, [BEGIN CONFIDENTIAL] [REDACTED] [END CONFIDENTIAL], who, collectively, have more than seventy-five (75) years' experience with the design, development, engineering, construction and operation of electric generation facilities. These include generation facilities authorized and operating within the Commonwealth of Virginia:

- **Hopewell Cogen** -- a 110 MW solid-fueled cogeneration facility located in Hopewell, Virginia. Hopewell Cogen began commercial operation in 1987 and continues in-service within PJM-DOM;
- **James River Cogen** -- a 110 MW solid-fueled cogeneration facility located in Portsmouth, Virginia. James River Cogen began commercial operation in 1988 and retired from service in 2015; and
- **Spruance Generating** -- a 220 MW solid-fueled cogeneration facility located in Richmond, Virginia. Spruance Generating began commercial operation in 1992.

Additionally, Balica personnel have been involved in generation projects located throughout the United States and in other countries, including:

- **Lumberton**—a 35 MW solid-fueled cogeneration facility located in Lumberton, North Carolina. This facility began commercial operation in 1985;

<sup>23</sup> A basic Google search shows company owner listed on Linked-In is Hal Hewes from Bend, Oregon. The public face is often Jef Freeman, a consultant from Charlotte, NC with a long history with Cogentrix. Cogentrix lists itself as “owned by funds managed by The Carlyle Group.” Raju (Narayan) Gupta is Business Development Manager in Washim, Maharashtra, India. Irfan K. Ali, Managing Member, has many private sector connections including US real estate and Pakistani coal. Ali’s recent venture in mini nuclear reactors with Advanced Reactor Concepts, LLC (ARC) does not appear active.

<sup>24</sup> <http://www.scc.virginia.gov/docketsearch/DOCS/3h6d011.PDF>, p. 8.

Notably, these four plants (Hopewell, Genco, Spruance and Lumberton) are located in environmental justice communities based on demographic statistics of race and/or income. I investigated these sites within the past five years because of toxic releases. According to my research, supported by demographic analysis from Energy Justice Network,<sup>25</sup> Hopewell (VA), Portsmouth (VA), the southeast industrial corridor at the border of Richmond and Chesterfield County (VA), and Lumberton (NC) are 'sacrifice zones,' a label assigned to highly polluted sites where vulnerable populations reside. This term may become pertinent to Charles City County with regard to the Roxbury Industrial Corridor, the location of the Chickahominy gas plant. In front of the SCC, a representative of the county government identified this area for 'targeted industrial growth.'<sup>26</sup> Because of concentrated toxic burden at levels higher than surrounding areas, the corridor appears to be a planned sacrifice zone located near two threatened Native American nations with populations of approximately 1,200 (Chickahominy) and 200 (Eastern Chickahominy).

Before a weighty decision like this gas permit, the county government needs access to the best available information. Because of SCC protections, the hearing transcript reads like **Figure 5**.

**Figure 5: SCC Hearing Transcript<sup>27</sup>**

6	MS. KAIBER: Your Honor, I have a couple
7	of confidential questions for Mr. Freeman. So I don't
8	know --
9	THE HEARING EXAMINER: I would ask those
10	that have not signed the confidentiality agreement to
11	please step outside. Ms. Chieppa, if you would come
12	back because I have a request. Let me just go off the
13	record for a moment.
14	(A discussion was held off the record.)
15	THE HEARING EXAMINER: Let's go back on
16	the record.
17	(Pages 28 through 30 are confidential and
18	under seal.)

Chickahominy Power emerged without a track record. Thus, imposed confidentiality about Balico, LLC during the SCC process generates concern. Based on **Figure 5** (above), it seems Ms. Chieppa, who was representing the county government, did not have access to key information. The APCB needs to provide additional oversight given the importance of this transaction to Charles City County economically as well as ecologically. The mandate and duties of the SCC, DEQ, and the APCB are not the same.

### **Were Promises to the County Inflated?**

Economic projections by Mr. Tufaro, a SCC staff member, were quite optimistic (**Figure 6**).<sup>28</sup> The APCB has an obligation to verify these rosy assertions.

<sup>25</sup> <http://www.energyjustice.net/map/nationalmap>.

<sup>26</sup> <http://www.scc.virginia.gov/docketsearch/DOCS/3kn4011.PDF>, p. 8-9.

<sup>27</sup> <http://www.scc.virginia.gov/docketsearch/DOCS/3kn4011.PDF>.

<sup>28</sup> <http://www.scc.virginia.gov/docketsearch/DOCS/3hnb011.PDF>.

### Figure 6: SCC Staff Projections in Testimony<sup>29</sup>

Mr. Tufaro summarized the positive economic impacts the Facility will have on the local and regional economies. In particular, the Facility will provide hundreds of millions of dollars in private infrastructure investment in the Commonwealth and millions of dollars in annual property taxes once operational. During peak construction, there will be approximately 800 to 1,000 construction workers on-site. Once the Facility is operational, it will provide approximately 35 to 40 full-time jobs. In addition, the Facility will purchase goods and services through local vendors and suppliers. Charles City County will benefit from the local property tax revenue over the life of the Facility, while there will be little impact on Charles City County's services or infrastructure. The Company has indicated that it will accept all business risk associated with the Facility. Staff generally agrees with the Company's assessment of the direct and indirect economic benefits of the Facility. Ex. 6, at 15-17.

Provision of local contractors is a frequent promise made before large infrastructure projects like this, but it is not enforceable. It is also hard to achieve in rural counties like Charles City, where the scope of businesses is limited. More importantly, this early claim that there will be little impact on services or infrastructure does not hold after incentives (Figure 7).

### Figure 7: Proposed Incentives for the Project<sup>30</sup>

Subject in all respects to Section 6(a) below, the Company will receive the following incentives from the Locality and/or the Authority, as the case may be, as an inducement to locate the Project in the Locality:

(a) **Grants.** The Authority shall make the following Grants to the Company in accordance with the terms hereof:

(i) During the first ten-year period following the Project Completion Date (the "First Ten-Year Period"), the Authority will make cash grants to the Company in an amount equal to twenty-five percent (25%) of all Local Taxes paid by the Company for the period in question. The Authority will make such cash grants within sixty (60) days after the Company makes such payments of Local Taxes to the Locality.

Are these tax breaks a burden on the county government? Might the company need to make investments in emergency response, health care services, and communications infrastructure? It would seem Balico, LLC should not receive tax breaks at levels with the service sector or even light industry, since this plant required changing the local zoning through a Special Use Permit to heavy industry. The local government must install expensive new infrastructure while Chickahominy Power seems likely to receive a 25% refund in tax payments for first decade (Figure 8), meaning fewer county funds to cover the costs of these required upgrades.

<sup>29</sup> <http://www.scc.virginia.gov/docketsearch/DOCS/3ks3011.PDF>, p. 11.

<sup>30</sup> It is unclear if this incentive package is final but these parameters were under discussion <https://drive.google.com/file/d/1K9gOzPAgUrrLmMhuLMghy5VwksPxMDib/view?usp=sharing>, p. 11-17.

### Figure 8: Proposed Incentives for the Project<sup>31</sup>

(c) Reimbursement of All Locality Fees. The Authority will make cash grants to the Company to reimburse the Company for all fees related to all permits to be issued by the Locality in connection with the initial construction of the Project including but not limited to, building permits, water and sewer connection fees, etc. Such cash grants will be made by the Authority to the Company within sixty (60) days after the Project Completion Date.

(d) Fast-Tracking of Permits. The Locality will use its reasonable best efforts to fast-track all Locality permits related to the Project at no cost to the Company.

Balico, LLC's SCC application states that the cost of construction will not be borne by Virginian ratepayers (Figure 9). Taxpayers in Charles City, on the other hand, seem to lose quite a bit through the inventive package the corporation requested of the county in 2018 after the SCC process.<sup>32</sup> Jef Freeman of Balico, LLC told the Richmond Times Dispatch a main plant benefit is construction of water infrastructure without mentioning that the county could likely pay 100% of this cost.<sup>33</sup> A new pipeline would transport 15 million gallons of water daily from the James River to cooling facilities.<sup>34</sup>

### Figure 9: Promise to Taxpayers to Cover Construction and Operation Costs

While the proposed Facility will provide substantial economic benefit to Charles City County and the surrounding area, CPLL and Chickahominy Partners bear all of the financial risk associated with the project. Moreover, because the Facility will be a wholesale merchant power provider, the costs of construction and operation will not be borne by Virginia ratepayers.

Regulatory authorities must require upgrades to communication infrastructure before permitting. This high-risk industrial facility cannot be sited in an area where internet and cell coverage are poor. Based on gaps in communication residents may remain uninformed if an emergency occurs, such as a gas leak or an explosion. APCB duties include oversight of health and safety, as well as assuring the appropriateness of siting.

The APCB is unable to making decisions about economic impact without information on the two gas plants (i.e., C4GT and Chickahominy Power) together. Industry sources suggest these plants may link efforts.<sup>35</sup> Addressing the estimated \$4.2 million dollar upgrade to the Dominion Substation necessary for the gas plants, a PJM Interconnection, LLC (PJM) system impact study found C4GT "may not be responsible for 100% of the identified network upgrade cost" because of other network needs, such as another interconnection request or merchant transmission upgrade. APCB must look at these plants together during economic analysis, especially since C4GT has required permits and could begin construction.

<sup>31</sup> Ibid.

<sup>32</sup> I accessed this information as result of a FOIA request. Based on electric communications, it appears the county government was not planning on this package. It certainly changes economic calculations. If the firm had been forthcoming earlier about its concerns regarding receiving financing in such a "competitive" environment, county officials might have asked for matching investments from Balico, LLC before the company made this formal request in 2018.

<sup>33</sup> [https://www.richmond.com/news/plus/williams-does-charles-city-have-too-much-energy-for-its/article\\_bce883c8-eaca-5b3c-ac2a-54ceb999a546.html](https://www.richmond.com/news/plus/williams-does-charles-city-have-too-much-energy-for-its/article_bce883c8-eaca-5b3c-ac2a-54ceb999a546.html).

<sup>34</sup> <http://www.scc.virginia.gov/docketssearch/DOCS/3ks3011.PDF>, p. 9.

<sup>35</sup> [https://www.spglobal.com/marketintelligence/en/news-insights/trending/plces58bpkm5z2mwqye\\_ow2](https://www.spglobal.com/marketintelligence/en/news-insights/trending/plces58bpkm5z2mwqye_ow2).

Employment at the gas plant will be 30 to 40 long-term jobs.<sup>36</sup> With some specialized and administrative jobs unlikely to go to county residents, this project will provide few local jobs after more than a billion dollar investment. With targeted investment in local renewable energy, this money could do more to financially benefit local households and promote long-term economic development in the county and state.

### DEQ's Inadequate Environmental Justice Review

From the start of the process until 2019, an Environmental Justice review is absent. This is a void in the Environmental Impact Assessment (EIA) done in 2017 by Angler Environmental.<sup>37</sup> Furthermore, the poor quality of the online record for EIA makes it difficult to conduct professional assessment about important historic resources of cultural value (Figure 10). There should be a decipherable copy for an important document like the EIA of a billion dollar plant.

Figure 10: An Example of Document EIA Quality on the SCC Docket

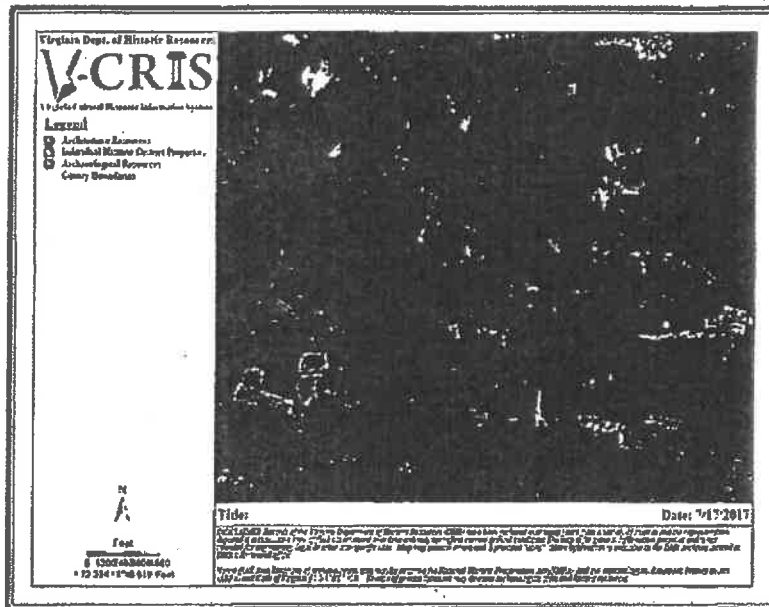


Figure 12. VDHR V-CRIS map showing pipeline and archaeological sites near the center of the alignment.

In February 2017, Balico LLC submitted a Prevention of Significant Deterioration (PSD) permit application<sup>38</sup> with revised application submissions in November 2018 and January 2019. Balico, LLC may not have communicated with DEQ permit writers (Figure 11) for a long period. Sudden movement at the end of 2018 and beginning of 2019 left DEQ permitting staff less prepared and potentially working in haste.

<sup>36</sup> <http://www.scc.virginia.gov/docketsearch/DOCS/3jm%24011.PDF>, p. 18.


<sup>37</sup> The EIA can be found on the SCC docket in five parts:

<http://www.scc.virginia.gov/docketsearch#caseDocs/137104>.

<sup>38</sup>

[https://www.deq.virginia.gov/Portals/0/DEQ/Air/Chickahominy\\_Power\\_Plant/Documents/application\\_for\\_Chickahominy\\_Power\\_Plant\\_52610.pdf](https://www.deq.virginia.gov/Portals/0/DEQ/Air/Chickahominy_Power_Plant/Documents/application_for_Chickahominy_Power_Plant_52610.pdf).

Figure 11: Questions about the Information Briefing in May of 2017

 **Commonwealth of Virginia**

Sinclair, Alison <alison.sinclair@deq.virginia.gov>

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**Fwd: Chickahominy Power BACT emission limits.**  
1 message

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Sinclair, Alison <alison.sinclair@deq.virginia.gov> Thu, Sep 20, 2018 at 9:38 AM  
To: "James Kyle (DEQ)" <james.kyle@deq.virginia.gov>, stanley.jagger@deq.virginia.gov, michael.kiss@deq.virginia.gov, robert.lute@deq.virginia.gov

Chickahominy Power (52610) submitted their PSD application in February of 2017. They had their Information Briefing in May of 2017 (you may remember it was NOT a very good one and James and I had to cover for them when the one citizen that showed up had many questions that the representatives could not answer). I discussed BACT with them in February 2018. Since then, I've barely heard a whisper from them. The email below was the last correspondence I had with them (actually AECOM, not Balico) other than them asking for a copy of the CAGT permit on July 23, 2018. As far as I know, they never submitted any modeling information to DEQ (and were breaking it back in March 2018) since the new owners of the project were re-working specifics.

If they send in a revised air permit application, I think they need to have another Information Briefing (and this time I will show them what they are supposed to discuss) at the very least. When should we withdraw the old application completely and have them resubmit everything again (and pay the new PSD permit app fee)? I feel this process is taking too long. I will have to do another BACT analysis for this facility now, since almost 10 months have gone by (maybe they will surprise me and turn a revised BACT analysis in, but I'm not optimistic).

Any thoughts on the matter? Thanks.

The DEQ permit writer worked with other staff to cover for the company when they could not answer citizen questions. This inability on the part of Balico, LLC demonstrated need for another Information Briefing. DEQ staff offered to teach how to do BACT (best available control technology) analysis as well as this citizen briefing process. The spirit of this sample communication fits with evidence I documented in the permitting of Buckingham Compressor Station. DEQ air permit staff (state employees paid with taxpayer dollars) spend many extra hours tutoring gas industry so they can pass regulatory steps and receive permits, instead of holding them accountable when they show up unprepared. In the case of Chickahominy Power, a new Information Briefing never occurred -- this appears to violate regulatory requirements.

DEQ's use of EJSCREEN is problematic -- as it was in the case of the Buckingham Compressor Station (BCS) -- but this time DEQ created additional inconsistency with their irregular choice to compare census block groups against the county rather than state. Note just a few months earlier for BCS DEQ compared with the state. The methods used between the cases should be the same. Otherwise, DEQ's continued use of EJSCREEN is so inappropriate in this context, it does not warrant further attention, except to point out that it foregrounds DEQ's unwillingness to attend to the caveats written by the Environmental Protection Agency (EPA) about the limitations and caveats of EJSCREEN use.<sup>39</sup>

Based on information received under a FOIA request, on April 24 an APCB member requested additional DEQ environmental justice analysis for board members in advance of the hearing (Figure 13).

<sup>39</sup> <https://www.epa.gov/ejscreen/limitations-and-caveats-using-ejscreen>.

### Figure 13: Request from APCB Member

3) My other request is that I would appreciate the Department providing the Board with an environmental justice analysis on this permit prior to our taking action on it. Per the comment letter which the Board received from Dr. Mary Finley Brook (copy attached), the proposed plant "is located in census tracts ... that are 42% and 65% minority populations." It would be helpful to the Board to receive this analysis at least a week or more before the June 21 meeting.

As head of the Air Division, Mike Dowd's response was telling: "It's not clear the Air Division is comprised of the right folks at DEQ to do this analysis..." (Figure 14).

### Figure 14: DEQ Unprepared for Environmental Justice Analysis



Dowd, Michael

Cindy Berndt; Jeffery Steers; Taniera Thompson

4/25/2019

Fwd: BALICO/Chickahominy Power Project (Registration #52610)

If there are problems with how this message is displayed, click here to view it in a web browser.

We'll have to talk with Executive Management on the EJ issue. It's not clear the Air Division is comprised of the right folks at DEQ to do this analysis. It's also not clear what the expectations for this analysis are from either Roy, the board as a whole, or Executive Management....

----- Forwarded message -----

Since Charles City County and the local census block groups passed thresholds for environmental justice, enhanced review procedures should have been in place. One reason the March 5, 2019 DEQ hearing in the county might have only had ten participants was that it announced in New Kent and Charles City Chronicle but not the Richmond Times Dispatch (RTD), even though placement in the RTD is common in this county to assure public outreach.<sup>40</sup>

DEQ scheduled the APCB meeting in the north of the greater Richmond area, when Charles City County is located to the southeast of the city. It should be standard in environmental justice cases to locate the hearing proximate to the impacted area, if possible. There are private hotels with appropriate meeting rooms to the south or east of Richmond that would have been more accessible.

### Improving Cultural Literacy

Our federal and state agencies have limited knowledge of Native American and African American history, governance, and culture. One reason the Southern Environmental Law Center is petitioning for Federal Energy Regulatory Commission (FERC) rehearing of permits for the Atlantic Coast Pipeline (ACP) is poor consultation with Native American populations. This includes lack of recognition of historical rights, particularly following federal recognition of six Virginian first nations in January of 2018.<sup>41</sup> The Chickahominy Nation is identified in this ACP lawsuit and is experiencing conflict surrounding Dominion Energy's Skiffes Creek Transmission Lines.<sup>42</sup> A relatively small tribal government is dealing with several high-stake threats with few staff and less opportunities for legal counsel than most local or state governments.

<sup>40</sup> Best on a June 2019 phone conversation with a staff member of the Charles City County government.

<sup>41</sup> [https://www.southernenvironment.org/uploads/audio/FERC\\_ACP\\_Petition\\_for\\_Rehearing\\_FINAL.pdf](https://www.southernenvironment.org/uploads/audio/FERC_ACP_Petition_for_Rehearing_FINAL.pdf).

<sup>42</sup> <https://wydaily.com/local-news-old/2013/01/31/scc-changes-hearing-examiner-date-of-evidentiary-hearing-for-dominion-case/>.

Cultural insensitivity inundates Virginian politics, but new federal recognition of Virginian tribes provides a stepping-stone to improve native sovereignty. DEQ notified four tribes about the Chickahominy Power Station (**Figure 15**)<sup>43</sup> yet allowed the Chickahominy alone to speak about archeological sites located nearby, as discussed below.

### Figure 15: Tribes Contacted

----- Forwarded message -----  
From: Sinclair, Alison <[alison.sinclair@deq.virginia.gov](mailto:alison.sinclair@deq.virginia.gov)>  
Date: Thu, Feb 14, 2019 at 10:02 AM  
Subject: Re: Contact for Chickahominy Power Plant  
To: Thompson, Tamara <[tamera.thompson@deq.virginia.gov](mailto:tamera.thompson@deq.virginia.gov)>

Sure.

On January 31 I sent an email, with the Public Notice attached, to the distribution group for a PSD (FLMS, EPA, Local government, PSD email list), including the following: [chickahominyindiantribe@gmail.com](mailto:chickahominyindiantribe@gmail.com) and [pamunkeytribe.org](http://pamunkeytribe.org) which I got from the Internet. I sent a letter to Mr. Custalow (Mattaponi tribe) who is on the PSD mail notification list, as well as Eastern Division of the Chickahominy Indians, 2895 Mt. Pleasant Road, Providence Forge, VA 23140 - with the Public Notice enclosed. The Eastern Division is separate from the other Chickahominy group and they don't have an email address.

Those are the only groups that are anywhere near the proposed site.

3

<https://www.commonwealth.virginia.gov/virginia-indians/state-recognized-tribes/#d.en.7887>

On Thu, Feb 14, 2019 at 9:46 AM Thompson, Tamara <[tamera.thompson@deq.virginia.gov](mailto:tamera.thompson@deq.virginia.gov)> wrote:  
Thanks, Alison.

Could you tell me again who and how we notified the different tribes about the PSD permit. Keep getting questions and I want to make sure I'm accurate in what I'm telling people. Thanks!

Virginia is Native American territory. When land is taken from First Peoples, the cultural harm is profound. Before going any further with a permit for Chickahominy Power or with construction of C4GT the state needs to resolve land rights with the Chickahominy, Eastern Chickahominy, and others with historical claims to the area.

### Historical Preservation

With construction plans, there would be alarming proximity, measured in feet and meters, between infrastructure and historical cultural resources as well as potential for unexpected discovery. The transactional stance of Chief Stephen Adkins of the Chickahominy in this letter (**Figure 16**) permitting damage to archaeological sites as long as there is payment for mitigation is one perspective of some ancestors of these historic sites.

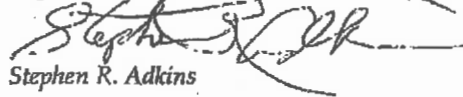
<sup>43</sup> <https://drive.google.com/file/d/1EKCVIsGMAiXkskHoIrMaFMbdxSuz328Z/view?usp=sharing>, p. 3-4.



**Figure 16: Details of Agreement with Chickahominy<sup>44</sup>**

*The Chickahominy Tribe requests Chickahominy Power, LLC to perform due diligence to ensure potential Indigenous Archeological Sites are preserved, or, in the event of damage, are appropriately mitigated.*

Regards,



Stephen R. Adkins

This approval granted in this letter does not represent all perspectives and cannot serve legally as a blanket permission to access and potentially damage sites dating back thousands of years and involving lineages beyond the modern day Chickahominy leadership.

**Complex Racial Justice**

There is a long history of intermarriage between African American and Native American groups in Charles City County and across Virginia. 'Red-Black' communities and histories remain poorly understood and are inadequately addressed by SCC, DEQ, and Balico, LLC. This permit appears to assign the Chickahominy Chief as the singular voice for all people of color in a complex multi-ethnic society. As mentioned in Part 1 of this report, federal recognition creates new opportunities and responsibilities for the Chickahominy to self-govern and any agreement with Chickahominy Power needs to be re-negotiated in light of federal recognition and to permit a space for free, prior and informed consent (FPIC) as this did not occur with the original process. Yet the Chickahominy leadership cannot usurp roles belonging to other minorities, who have also been without representation historically. Given the Chickahominy make up about 1,000 of the people in a 5-mile radius around the plant, there are about 7,250 unrepresented by an agreement with the Chickahominy and a significant number of these individuals are people of color (i.e., African American and/or African American-Native American).

Black-red communities remain poorly documented globally even though this pattern is widespread around the world. African American and Native American intermarriage has been key to many communities I have worked since the 1990s.<sup>45</sup> Being in a mixed race household for more than two decades,<sup>46</sup> I am aware that state institutions are often clunky and insensitive when dealing with two and more racial categories. While racial mixing is not always discussed when describing the outcomes of the US 'melting pot,' many Americans fit a biracial, multiracial or 'brown' category that is often confusing under law and frequently misunderstood or misrepresented socially. Exclusions of mixed race populations with African ancestry occurred within white institutions as well as with many Native American tribes historically in Virginia.<sup>47</sup> Although widely pertinent, the Red-Black history of Virginia remains poorly documented. In relation to this gas permit, Weyanoke Association<sup>48</sup> co-founder Hugh Harrell documented concerns about the Charles City process. Harrell was related to two members of

<sup>44</sup> Full letter at <http://www.scc.virginia.gov/docketsearch/DOCS/3kh8011.PDF>.

<sup>45</sup> <https://geography.richmond.edu/faculty/mbrook/>.

<sup>46</sup> My husband and children's heritage is Miskitu/Afro-Caribbean, so this is an important topic in our nuclear and extended families.

<sup>47</sup> Including as part of the history of the Racial Integrity Act. Two state-recognized tribes have changed historical restrictions in recent years.

<sup>48</sup> <http://www.weyanoke.org/index.html>.

the county Board of Supervisors and has a long history in Charles City.<sup>49</sup> Harrell wanted the perspectives of other Native American tribes other than the Chickahominy and for people of mixed African-Native lineage to be able to speak in front of the APCB.<sup>50</sup>

### Violations of Best Practice

- DEQ needs to correct its prior modeling defects and truly model the two gas power station (Chickahominy and C4GT) together, particularly with proposed high levels of particulate matter from the two plants combined.<sup>51</sup>
- DEQ use of EJSCREEN in this manner is inappropriate -- as it was with Buckingham Compressor Station. The EPA includes a long list of caveats about the limitations to EJSCREEN<sup>52</sup> that DEQ ignores. Since use of EJSCREEN will provide only partial information, please conduct independent demographic and environmental justice review to take avoid discrimination.<sup>53</sup>
- The March 1, 2019 meeting of Balico, LLC with the Chickahominy Tribe discussed in DEQ's Minibook<sup>54</sup> was one brief meeting 2.5 years into a permitting process after DEQ had already written a draft permit. DEQ did not even know about the meeting with the Tribal Council until well after the fact. This type of superficial last minute "participation" exercise is not even close to national or international standards for prior or informed consent and should never be considered best practice. There is no evidence of the exchange of any significant health or environmental information. The meeting appears to represent only one small step of a necessary process across many months to assure safeguards to public health and safety.
- I witnessed when DEQ air permit staff at March 5, 2019 Q & A at Charles City County Administrative Building told the public in attendance not to include information in comments if it is not a technical air permit concern or it would not be considered relevant. In some cases, DEQ comments later end up in front of the APCB, whose mandate is more holistic and integral.<sup>55</sup> When communicating about potential regulatory steps, DEQ air permit staff need to educate about the board process too. APCB needs to reopen public comment about Chickahominy Power and allow the public to respond to the four areas covered by this citizen body that predates DEQ by decades.

### Report Summary

- A broad array of public health and social service agencies working with the tribal government and other local, state and federal organizations need to conduct a participatory and culturally sensitive comprehensive health impact assessment (HIA) and risk assessment for the Roxbury Industrial Corridor and Chickahominy Power.

<sup>49</sup> See Richmond Times Dispatch articles on Hugh and Anita Harrell and the Weyanoke Foundation in Charles City from 1999 and 2006, for example.

<sup>50</sup> Hugh Harrell made comments for Weyanoke Association and Southeast CARE Coalition on June 1 and 8, 2019.

<sup>51</sup> [https://spatial-analysis-findings.s3.us-east-](https://spatial-analysis-findings.s3.us-east-2.amazonaws.com/Independent+spatial+data+analyses+of+the+2019+Chickahominy+Power+Plant_6-4-19.pdf)

[2.amazonaws.com/Independent+spatial+data+analyses+of+the+2019+Chickahominy+Power+Plant\\_6-4-19.pdf](https://spatial-analysis-findings.s3.us-east-2.amazonaws.com/Independent+spatial+data+analyses+of+the+2019+Chickahominy+Power+Plant_6-4-19.pdf)

<sup>52</sup> <https://www.epa.gov/ejscreen/limitations-and-caveats-using-ejscreen>.

<sup>53</sup> [https://spatial-analysis-findings.s3.us-east-](https://spatial-analysis-findings.s3.us-east-2.amazonaws.com/Independent+spatial+data+analyses+of+the+2019+Chickahominy+Power+Plant_6-4-19.pdf)

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<sup>54</sup> [http://townhall.virginia.gov/L/GetFile.cfm?File=meeting\1\29473\Agenda\\_DEQ\\_new\\_v1.pdf](http://townhall.virginia.gov/L/GetFile.cfm?File=meeting\1\29473\Agenda_DEQ_new_v1.pdf).

<sup>55</sup> <https://law.lis.virginia.gov/vacode/title10.1/chapter13/>

- The APCB must intensify and expand scope of review to include aspects of environmental justice that go beyond EJCScreen's limited scope. These should include comprehensive and cumulative emissions assessments, participatory methods to identify environmental, health and cultural impacts, and risk assessments and evacuation plans based on local knowledge. There needs to be a means to provide locally and publically accessible reporting of air emissions at the fence line of the plant.
- APCB must begin the public comment process over for all the people who were not aware of the plant by the March 20 deadline. I have personally spoken to dozens of people who did not know and now want to comment. This new call would have a different focus and new background documentation to prepare for the scope of comment to address scope of the APCB mandate and not just the DEQ air permit.
- This case following on the heels of Union Hill gives a clear message about the urgency with which DEQ needs to train its staff in environmental justice so the same patterns of discrimination like in Union Hill do not continue during DEQ permitting processes. Yet another round of amicus lawsuits following DEQ permits and APCB hearings shows necessity to improve structures and practices in Virginian institutions (state and local).
- A clear lesson to state officials and Virginians as a whole from Buckingham and Charles City County permitting processes is that we need environmental justice standards in our Virginian laws, policies, and practices. If consultants and officials screen better from the start, problematic permits like this would have been marked for enhanced review at least by 2017. If protective frameworks existed, DEQ could not get years into a permitting process before realizing they need environmental justice analysis.
- Balico, LLC's Chickahominy Power Station requires a complete in-depth APCB review with adequate information about the project for the board's legal mandate and duties.

## Appendix 1: Bibliography Addressing Public Health Risks from Gas

A peer-reviewed scientific and medical literature documenting harm to public health and particularly to vulnerable populations is expanding. Scholars call for more research. Among Virginian state environmental managers, there is little reference to this research or documented risks. As I observe DEQ staff speaking in public forums, they highlight their perspective that gas is cleaner than coal. Simultaneously they ignore extensive evidence of how the gas lifecycle contaminates air and water and drives climate change.

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# Appendix Two



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Last active Jun 4, 2019

Stephen Metts, The New School, NYC

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Summary Statement for Chickahominy Power Plant Independent Spatial Analysis - June 4, 2019

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## Summary Statement for Chickahominy Power Plant Independent Spatial Analysis - June 4, 2019

In a spatial analysis report for the Chickahominy Power Plant project currently under consideration with the Virginia Department of Environmental Quality, a series of concerning project aspects were quantified and mapped using publically available data. While the report itself goes into detail regarding each, a short summary is provided below:

1. The proposed gas-fired project would be the 5th such siting in the US where a combined output of > 2,500 MW is sited within 1.1 miles of another plant. This is an atypical configuration within the larger field of 1,700 + gas-fired plants. The current application does little to address the combined output and potential impacts of such a configuration on localized populations.
2. The current application contains little Environmental Justice (EJ) analysis, certainly none that could be considered *robust*. The only EJ document found in the current application is an appendix printout of EJSscreen for various project proximities. The spatial analysis in the report, however, details with both maps and tabular results the existence of EJ eligible local populations in close proximity to the project.
3. In addition to EJ eligible populations based on US Census data, the report further considers the spatial intersection with indigenous tribal lands, further contextualizing and bolstering EJ eligibility for this project.
4. In addition to the various demographic analyses of the report, consideration is given to the emission modeling methods and results found in the application. Mirroring consistent concerns and issues over modeling protocol found in the public record for this project, the report highlights the absence of any meaningful discussion, mapping or quantification of combined and localized emissions from both the C4GT facility and the Chickahominy plant. In light of this application deficiency, there is no method by which to gauge potential adverse and disproportionate air quality impacts on EJ eligible populations in close proximity to the combined projects. As such, the current application is deficient in both informing and protecting the public.

Independent spatial data analyses of the 2019 Chickahominy Power Plant, Charles City County, Virginia, for environmental justice, indigenous tribal lands and Significant Impact Levels (SILs) of modeled project emissions.

#### Project & Analyses Introduction:

In August 2017, Chickahominy Power, LLC (Applicant) - a subsidiary of Balico, LLC - filed with the Virginia State Corporation Commission an application for a 1,650 MW shale gas plant to be situated in Charles City County, Virginia. The project has progressed through an administrative course and is currently in final phases of air permitting with Virginia's Department of Environmental Quality (VDEQ). The next action will be formal consideration with the State Air Pollution Control Board, June 21, 2019.

The project features one of two options (GE 7HA.02 option) or (MHPS M501J option):

- Three General Electric (GE) 7HA.02 class natural gas-fired combustion turbine generators, each provided with a HRSG and a steam turbine generator.

or

- Three Mitsubishi Hitachi Power Systems (MHPS) M501JAC class natural gas-fired combustion turbine generators, each provided with a HRSG and a steam turbine generator.

Named for the Chickahominy Nation, indigenous peoples populating lands of east central Virginia near Richmond for centuries and on whose historical lands the project would be sited, this gas-fired plant is anticipated to be completed in the spring of 2022. The project is situated at the 185-acre existing Dominion Energy Chickahominy Substation site, and is crossed by two Dominion transmission lines and a 16-inch Virginia State Gas pipeline. The project is the third major energy generator proposed for Charles City County in just four years. Immediately northwest of this large project, county Board of Supervisors approved an 1,060 MW shale gas power plant known as the C4GT Power Station which has not yet broken ground as of June, 2019.

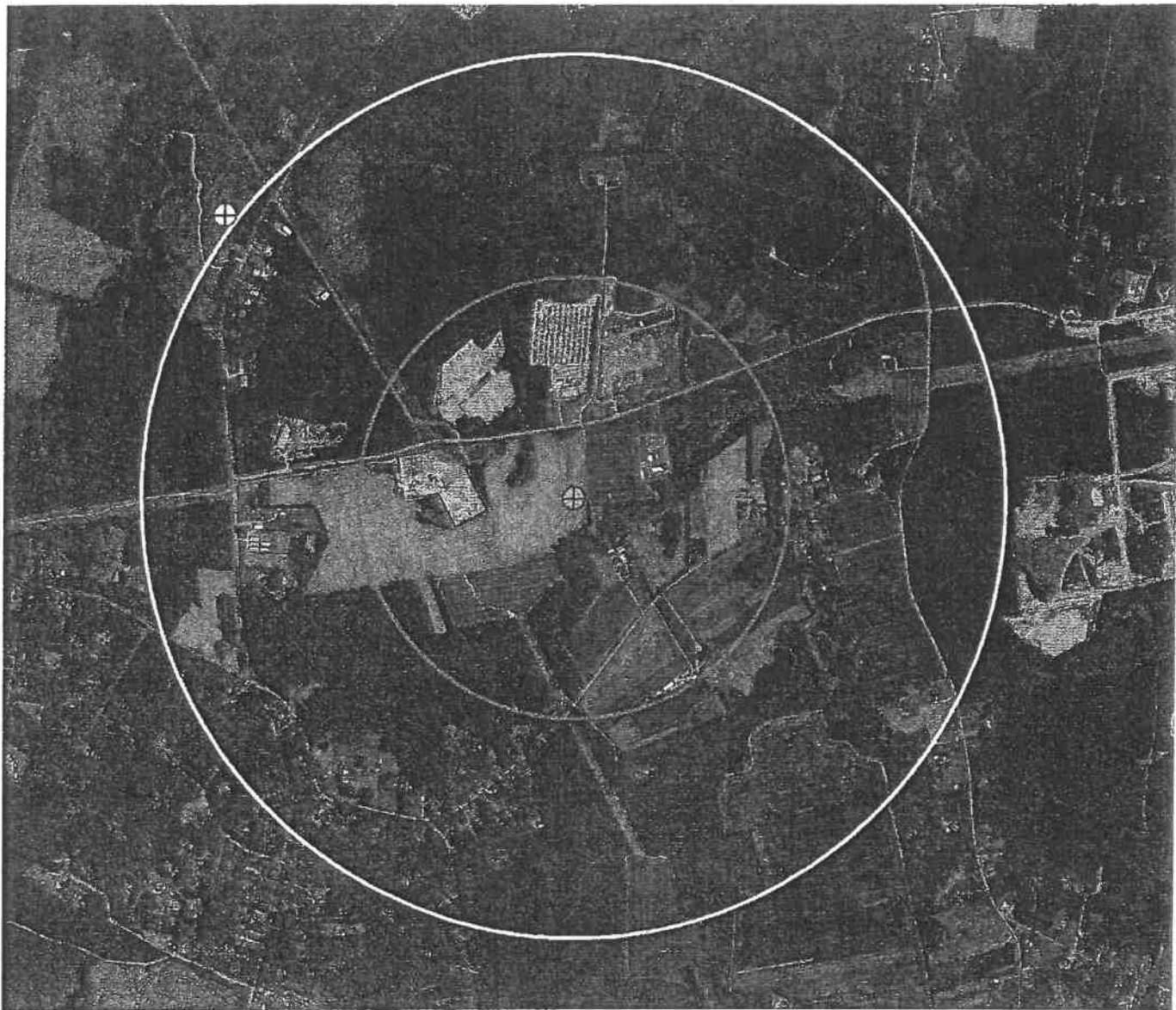
The analyses in this document utilize various US Census data products; spatial data available from Virginia's Geospatial Repository VGIN; EIA.gov spatial data; and modeling documents posted at the DEQ project site. Importantly, while the project was originally filed in 2017, revised applications were performed in November 2018 and most recently, January 2019. Much of the analyses in this document is related to emission modeling found in the latter 'Revision 3' application package. Broken into 4 sections, the analyses for demography, environmental justice and modeled emissions are briefly summarized as follows:

- **Project site location and characteristics:** Overview of spatial characteristics of project location with an emphasis on proximity to transmission lines, accessible 16" gas pipeline and the C4GT Power Station location. Further discussion of the Chickahominy plant proposal relative to gas-fired plants nationwide finds this proposal to be atypical both in size and proximity relative to the majority of other plant location configurations.
- **Baseline demographic and population density analysis:** Mapping and discussion of project area demographics relative to Virginia State, with a focus on minority and poverty rate US Census variables derived from the American Community Survey 2012-16 (ACS). Further consideration of a population density proxy via Virginia's address features dataset, as well as simple weighted apportionment methods.
- **Environment Justice and indigenous tribal lands analysis:** Mapping and discussion of Environmental Justice eligible geographies, local indigenous tribal land and demographic variables from ACS pertaining to the American Indian race designation.
- **Spatial dispersion and concentration of modeled impacts:** Review of emissions modeling summarizations from project AERMOD runs as found in the 'Revision 3' application package. Particular attention is given to background emissions and site proximity to the future C4GT Power Station northwest of the project site. Emission isopleth maps per pollutant found in Appendix G are reviewed relative to localized populations.

#### Project site location and characteristics:

As seen in the following Site Location map (page 2), the proposed Chickahominy project (Pink Marker) is situated on 185 acres of cultivated land adjacent to a current transmission station (Chickahominy Substation) which in turn is crossed by two Dominion transmission lines and an existing 16" Virginia State gas pipeline. Approximately 1 mile to the east is the Charles City Municipal Landfill which features an onsite gas plant (16 MW) operated by Ingenco. Northwest of the project situated at the 1 mile proximity distance is the future site of the C4GT facility that ostensibly will be fed via the same 16" existing gas pipeline as the Chickahominy project. The confluence of exceptional size (a combined output of 2,710 MW) and close proximity deems this geography unique amongst gas plant configurations nationwide.

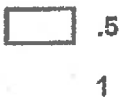
A review of the U.S. Energy Information Administration dataset for powerplants would place the Chickahominy project as the 18th and the C4GT as the 116th largest gas fired plants in a total field of 1,719 plants (Gas variable as isolated from other fuel types). However, as mapped, the Chickahominy and C4GT geography portends a significant outlier in scale and proximity. On page 3, a mapping of gas plant distribution across the contiguous US accompanied by just 4 plant pairings within 1.1 miles of each other featuring a combined output of > 2500 MW underscores the rarity of this scale of output in such close proximity. Further, this is within an already narrow field of just 219 (12.7%) plant pairings - regardless of combined MW output - occurring within 1.1 miles of each other. Should both plants be built as planned, they will join this extreme subset of plant pairings of atypical MW output coupled with extreme proximity.



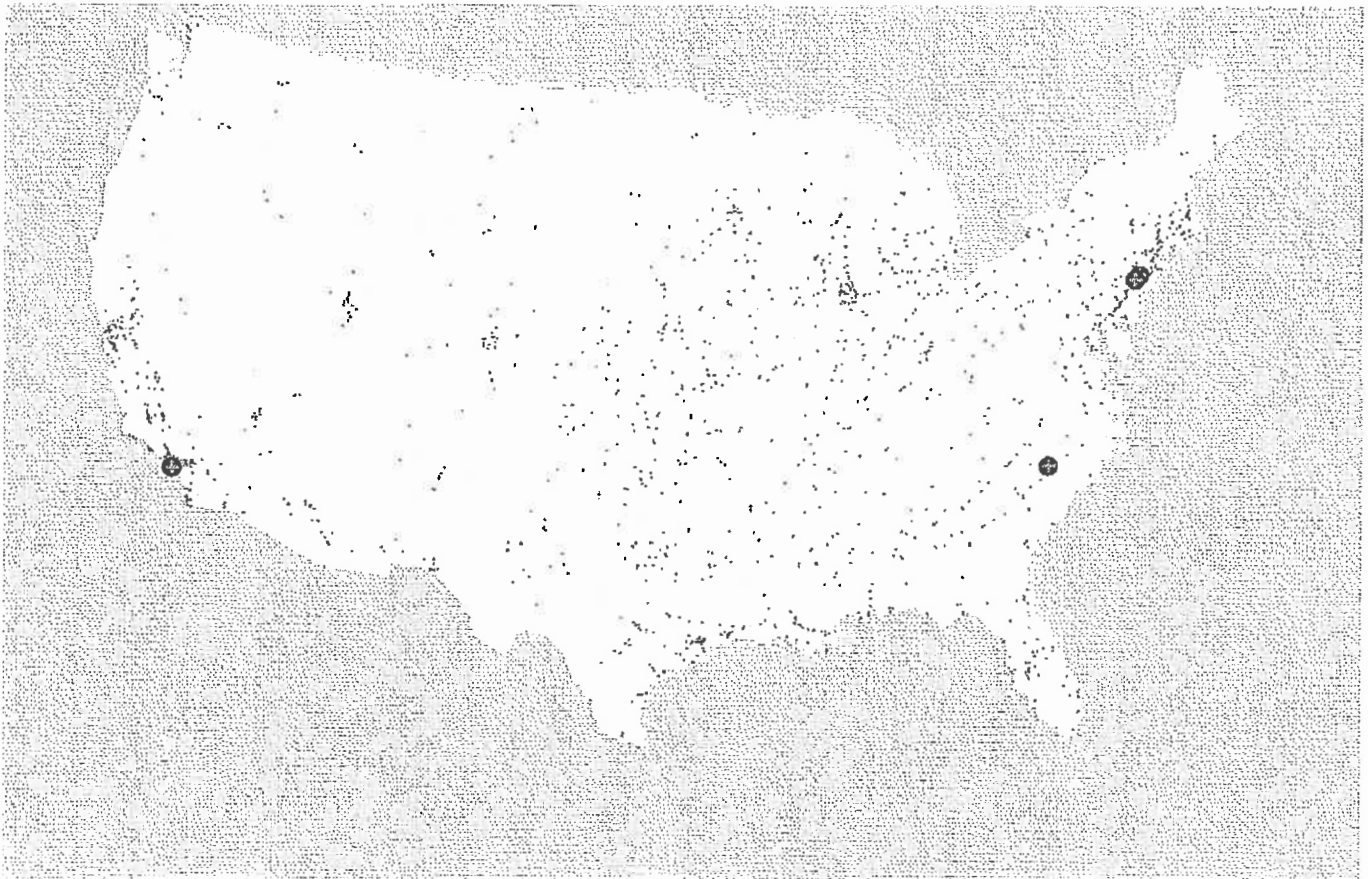
**Proposed Chickahominy Power Station | Site Location**

- Proposed | Modeled Chickahominy Power Plant
- ⊕ C4GT Facility

Proximity Distances (Miles)







### Location of > 2500 MW Gas Plant Pairings | Contiguous US

- ⊕ > 2500MW Plant Pairings
- Gas Fired Power Plants

Source: [eia.gov](http://eia.gov)

Four Plant Pairings within 1.1 miles with combined output > 2500 MW:

| Plant 1                            | Plant 2                    | Plant 1 MW | Plant 2 MW | Distance (miles) |
|------------------------------------|----------------------------|------------|------------|------------------|
| AES Alamos LLC                     | Haynes                     | 1922       | 1739.1     | 0.29             |
| PSEG Linden Generating Station     | Linden Cogen Plant         | 1740       | 974.1      | 0.85             |
| Ravenswood                         | Vernon Boulevard           | 2535.1     | 94         | 0.45             |
| Sherwood H Smith Jr Energy Complex | Hamlet Generating Facility | 2244.8     | 343.8      | 0.33             |



**Baseline demographic and population density analysis:**

In review of publicly accessible permitting documents for the Chickahominy plant, there exists no accessible demographic analysis beyond uncontextualized statistical results produced from an EJSCREEN report dated 1/30/2019 for several project proximities. In the report (Appendix C) - Environmental Justice Reports two critical demographic indicators - Minority and Low Income Populations - are reported in tabular format. EJSCREEN is a 'first pass' indicator profiler for vulnerable populations. However, it does not deliver a final eligibility decision. For such a determination, states such as New York and New Jersey have relied on EPA region guidance. In the case of Region 2 of which New York and New Jersey are part, EJ geographies are generally defined as follows:

Census blockgroups with percent poverty or percent minority higher than the state threshold are considered potential EJ areas

Applying the same threshold criteria logic to the Chickahominy project at .5, 1, 2, 3 and 5 mile proximities, the argument is made for EJ inclusion based primarily on the minority variable as compared to the median of all census geographies (Census Blockgroups - CBGs) across Virginia. Derived from ACS data in the B03002 Hispanic or Latino Origin by Race table, vintage 2012-16, the Virginia state minority mean is 36.99% wherein the minority population is isolated from the White Alone - Not Hispanic or Latino population. For the poverty variable, EJSCREEN uses the census table for households; in this analysis, ACS data in the B170001 Poverty Status in the Past 12 Months by Sex By Age is utilized wherein the mean poverty rate was found to be 12.4%. In the following table and maps on page 5 and 6, possible EJ eligibility is denoted per intersecting CBG with an added criteria requiring an additional 50% threshold for the minority variable as utilized in the relatively recent Atlantic Coast Pipeline Draft Environment Impact Statement (DEIS). It should be noted this additional 50% criteria is conservative and not utilized by all commenting parties on record (see particularly comment letter #4). As a result, it is arguable whether CBG 600100-1 should fall into the No or the Yes Eligibility category.

**Census Block Groups Intersections for % Minority and % Poverty variables:**

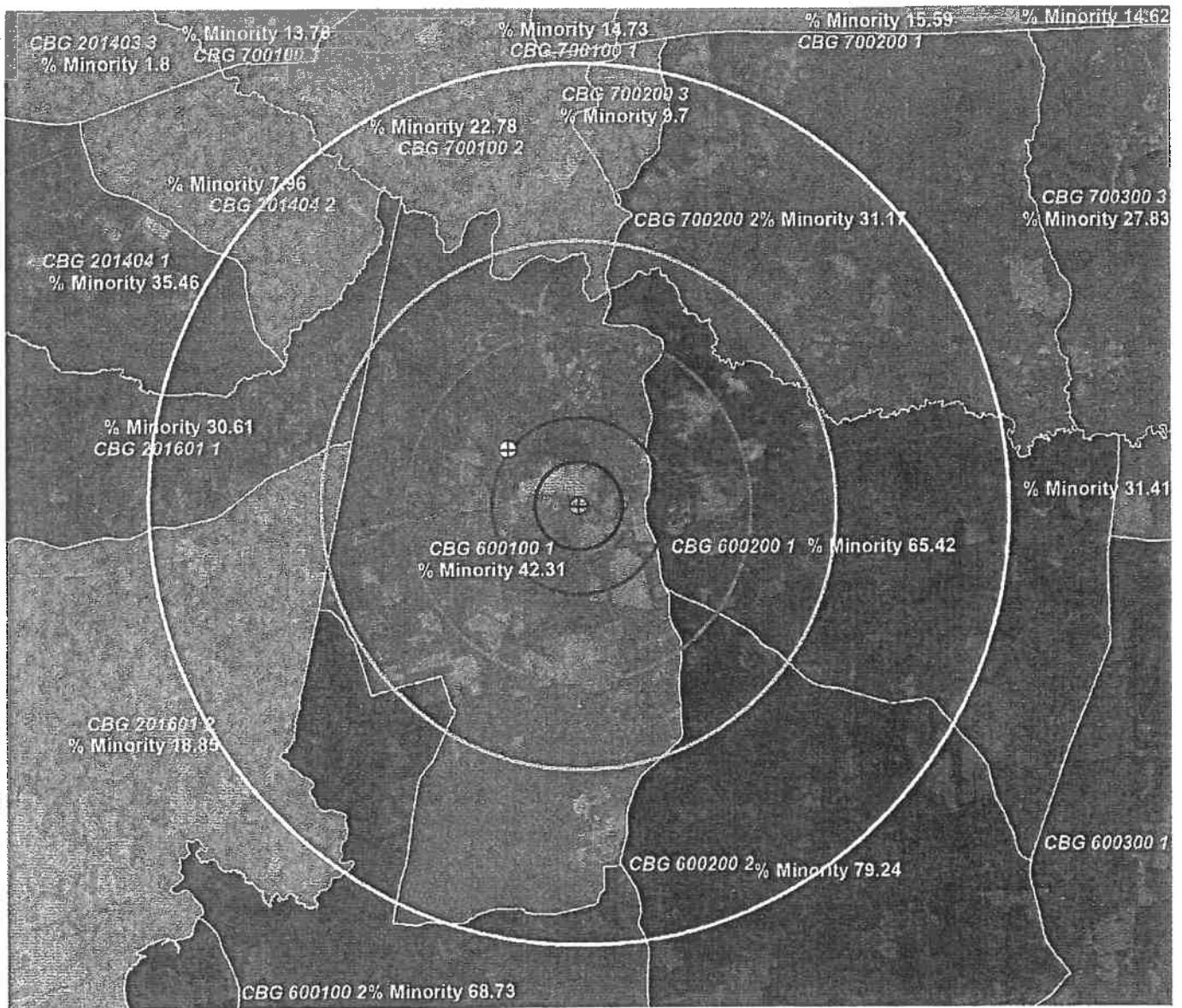
| Census Block Group | % Minority | % Poverty | Proximity Intersection Distances (Miles) | Eligibility              |
|--------------------|------------|-----------|--|--------------------------|
| 600100 - 1         | 42.31      | 8.88      | .5,1,2,3,5                               | No                       |
| 600200 - 1         | 65.42      | 13.91     | 1,2,3,5                                  | Yes - Minority + Poverty |
| 600200 - 2         | 79.24      | 11.69     | 2,3,5                                    | Yes - Minority           |
| 600100 - 2         | 68.73      | 26.14     | 3,5                                      | Yes - Minority + Poverty |
| 201601 - 2         | 18.85      | 1.92      | 3,5                                      | No                       |
| 201601 - 1         | 30.61      | 6.27      | 3,5                                      | No                       |
| 700100 - 2         | 22.78      | 1.96      | 3,5                                      | No                       |
| 700200 - 2         | 31.17      | 6.15      | 3,5                                      | No                       |
| 700200 - 3         | 9.7        | 8.4       | 5  | No                       |
| 201404 - 1         | 35.46      | 20.85     | 5  | Yes - Poverty            |
| 201404 - 2         | 7.96       | 5.55      | 5  | No                       |

On the issue of population density, again the current application is generally silent with little analysis. The only exception is the following declaration designed to narrowly contextualize the applicant's air modeling as 'conservative' relative to population density:

...the proposed Project site is located in a more rural area within a population density of 40 pop/mi<sup>2</sup> as compared to the location of the CO monitor, which has a population density in Henrico County of 1,313 pop/mi<sup>2</sup>.

Here the applicant utilizes adjacent Henrico County with a much higher population density than the project county Charles City. However, this is not a particularly meaningful comparison beyond highly aggregated considerations as it does little to shed light on the distribution of population within the analysis proximities. There are two alternative approaches available to address this issue. The first is simple geometrically weighted apportionment of Total Population per census tract. The second approach utilizes known address point locations as a proxy for human habitation. We would expect to see similar trends across both approaches; and a more suitable, precise method beyond an aggregated county to county comparison as utilized by the applicant for the narrow purpose of emission modeling.

The results of the two approaches are available as both maps and tables located pages 7 and 8. Generally, both approaches find population density to be similar outwards to the 10 mile proximity (population density for Virginia in aggregate is 122 persons per Sq. mile); thereafter the geography gives way to decidedly urban population densities found primarily in Richmond, Virginia.

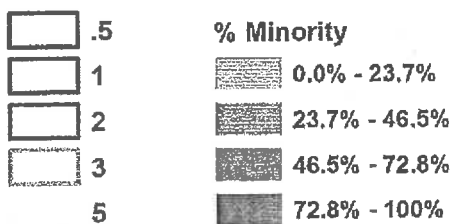


## Chickahominy Power Station | Demographic Analysis Minority Populations - % Minority per Census Block Group

⊕ Proposed | Modeled Chickahominy Power Plant

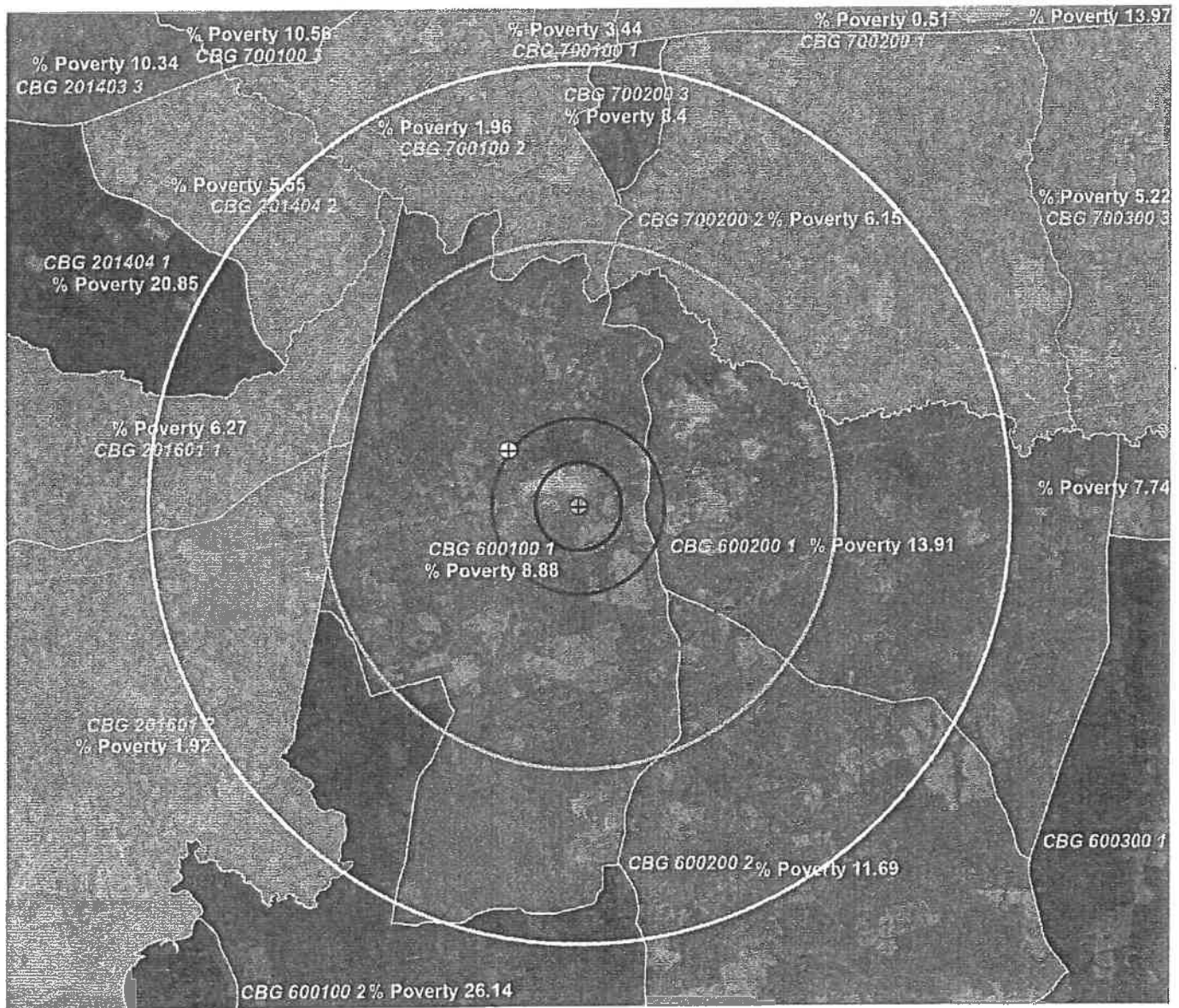
⊕ C4GT Facility

Proximity Distances (Miles)



Source: ACS, 2012-2016, table B03002

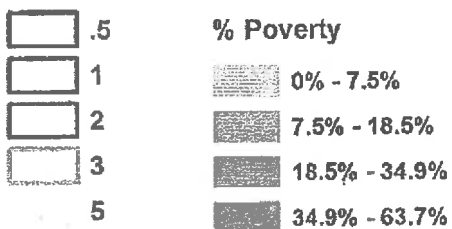




### Chickahominy Power Station | Demographic Analysis Poverty Populations - % Poverty per Census Block Group

- ⊕ Proposed | Modeled Chickahominy Power Plant
- ⊕ C4GT Facility

#### Proximity Distances (Miles)



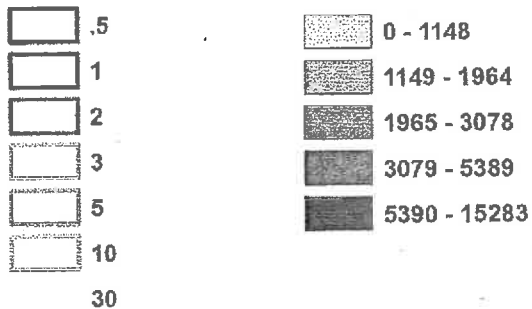
Source: ACS, 2012-2016, table B170001





## Chickahominy Power Station | Population Density Analysis

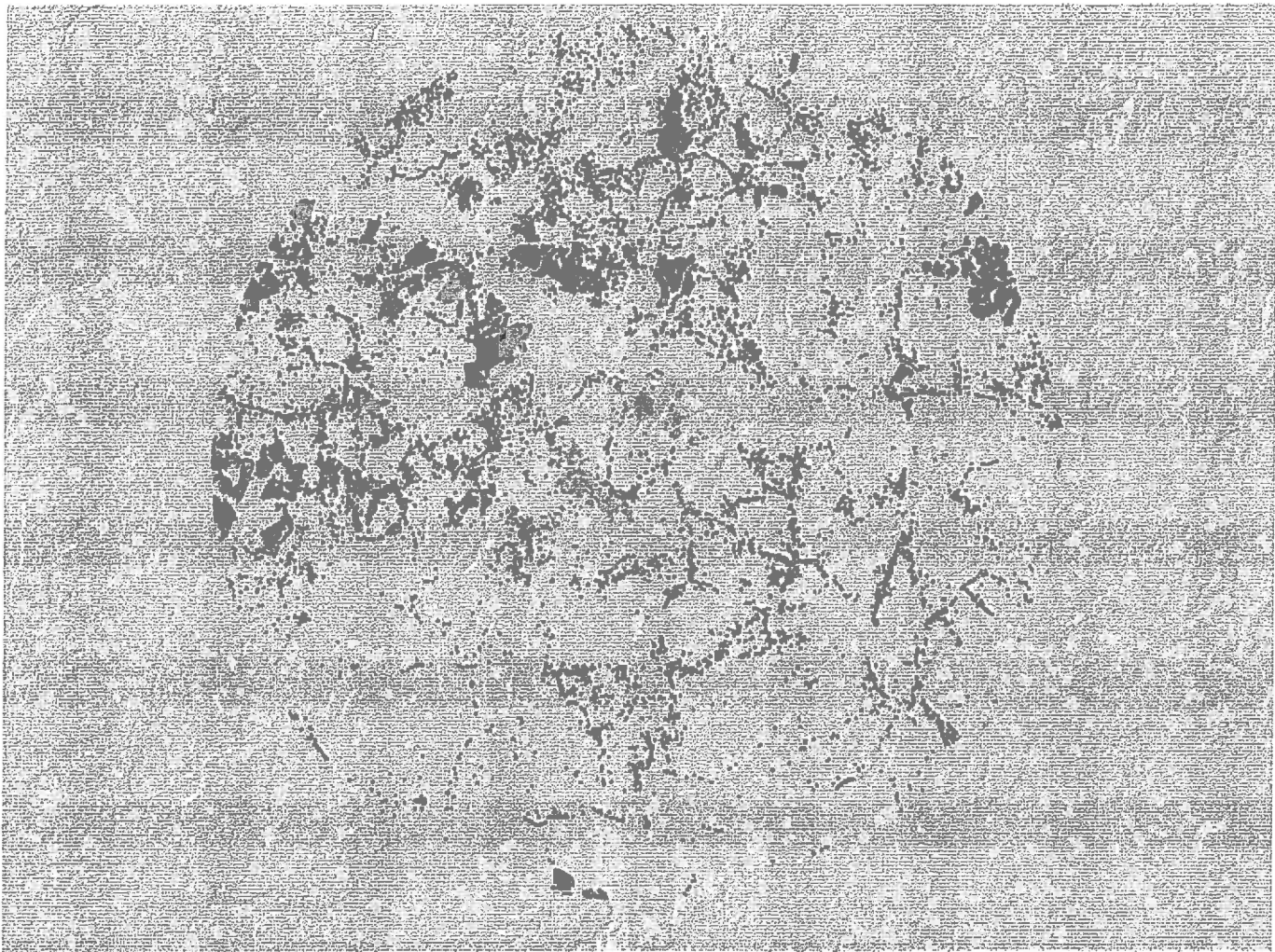
Proximities (Miles)      Total Population | Census Tracts



Source: US Census, ACS 2012-16







**Chickahominy Power Station | Address Point Density**

**Address Locations per Proximity (Miles)**

- .5
- 1
- 2
- 3
- 5
- 10



Source: Virginia GIS Clearinghouse (VGIN) Address Points



# Chickahominy Power Plant Proposal - Independent Spatial and Demographic Analyses Findings Statement

## Population Densities per Project Proximities | Simple Weighted Apportionment Method:

| Proximity Distance | Absolute Population | Persons per Sq. Mile |
|--------------------|---------------------|----------------------|
| .5                 | 54                  | 68.7                 |
| 1                  | 217                 | 69.0                 |
| 2                  | 856                 | 68.1                 |
| 3                  | 2009                | 71.0                 |
| 5                  | 8275                | 105.36               |
| 10                 | 30378               | 96.6                 |
| 30                 | 1194040             | 422.3                |

## Address Density per Project Proximities:

| Proximity Distance | Absolute Address Count | Addresses per Sq. Mile |
|--------------------|------------------------|------------------------|
| .5                 | 11                     | 14                     |
| 1                  | 90                     | 28                     |
| 2                  | 533                    | 42                     |
| 3                  | 1069                   | 37                     |
| 5                  | 4571                   | 58                     |
| 10                 | 17670                  | 56                     |
| 30                 | 536867                 | 189                    |

**Environment Justice and indigenous tribal lands analysis:**

From the previous section, it has been clearly demonstrated that EJ eligible tracts exist in close proximity to the project, and should be included in a further EJ analysis by the applicant and VDEQ. Further, while the project geography is decidedly rural based on two analysis methods found in the previous section, this fact alone does not relieve applicants and regulatory agencies from federal and state EJ policies and guidance. Further, even as the EJ threshold is crossed warranting further and enhanced EJ engagement, an additional EJ issue based on geographic intersection is that of indigenous tribal lands. The project's namesake is indeed related to immediate geography - historical land belonging to the Chickahominy Tribe. While not a federally defined geography, the US Census designates this area as a State Designated Tribal Statistical Area (SDTSA) defined as follows:

[SDTSAs] encompass a compact and contiguous area that contains a concentration of individuals who identify with a state recognized American Indian tribe and in which there is structured or organized tribal activity.

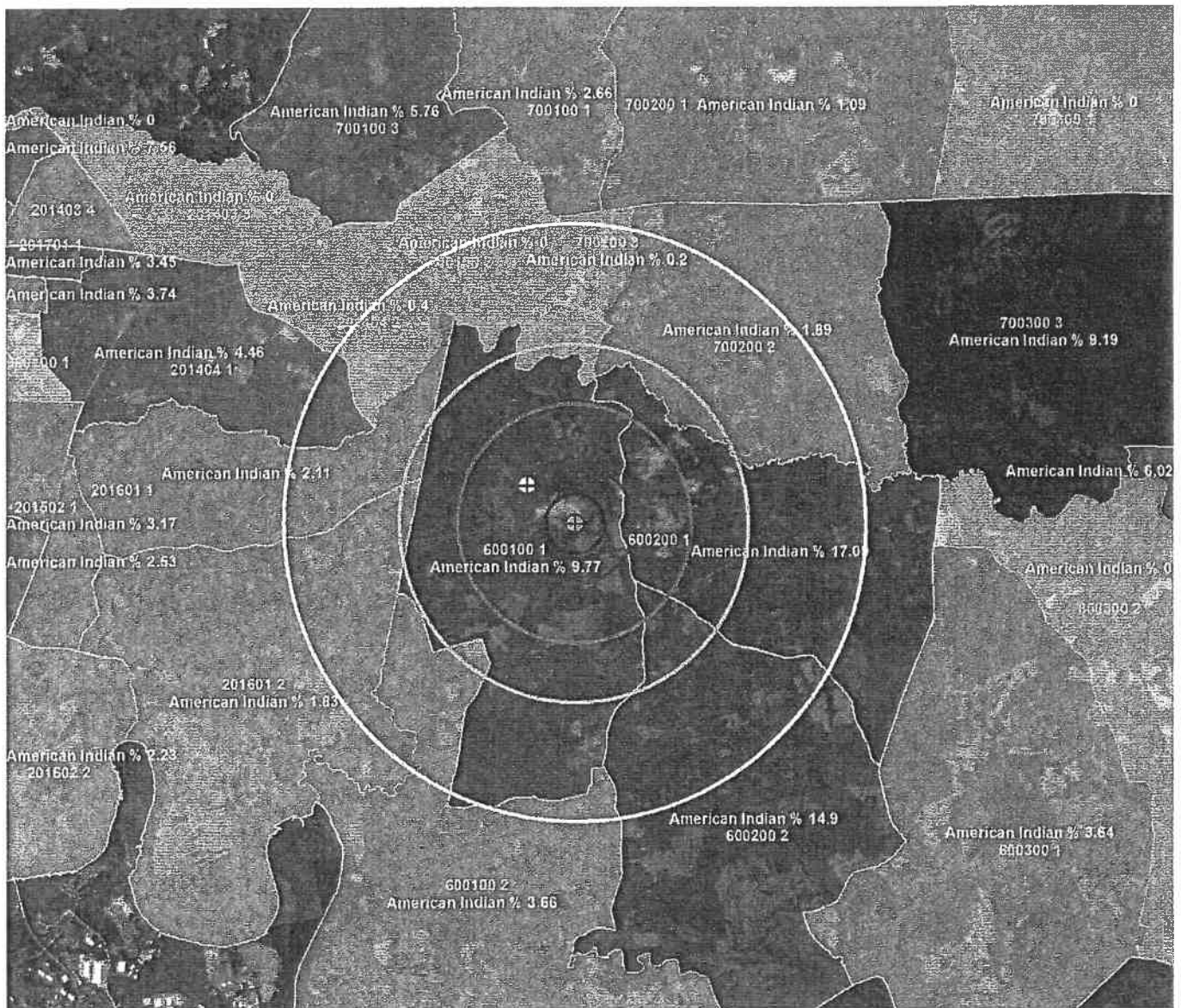
In review of the ACS 2013-17 statistical representation of the Chickahominy SDTSA in Virginia, the total population is found to be 3,649 persons. Recognized by Virginia State in 1983, the Chickahominy tribal geography does not possess clearly defined boundaries, rather individuals belonging to the tribe may be inferred from US Census data via both the SDTSA designation and through specific ACS census tables. In this particular analysis, ACS table B02010, vintage 2012-16, utilizes the following thematic focus to isolate likely Chickahominy tribe members in CBGs that intersect and surround the project site:

People who are American Indian or Alaska Native alone or in combination with one or more other races

In the summary table to follow and mapping on page 11, spatial distribution of American Indians throughout the various project proximities is evident. Here concentrations are significant throughout .5 to 5 mile proximities reinforcing EJ eligibility of Chickahominy tribe members and well as members of other indigenous and minority communities relative to the proposed project. While the Chickahominy tribe itself has no defined geographic unit as utilized in spatial analysis, the results of this census analysis are reinforced by the Native Land mapping project which features a generalized spatial representation of Chickahominy tribal lands in Charles City County.

**Census Block Groups Intersections for % American Indian variable:**

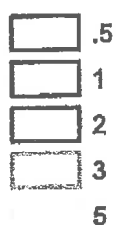
| Census Block Group | % American Indian | Absolute Count | Proximity Intersection Distances (Miles) |
|--------------------|-------------------|----------------|--|
| 600100 - 1         | 9.77              | 160            | .5,1,2,3,5                               |
| 600200 - 1         | 17.09             | 210            | 1,2,3,5                                  |
| 600200 - 2         | 14.90             | 160            | 2,3,5                                    |
| 600100 - 2         | 3.66              | 45             | 3,5                                      |
| 201601 - 2         | 1.83              | 20             | 3,5                                      |
| 201601 - 1         | 2.11              | 40             | 3,5                                      |
| 700100 - 2         | 0                 | 0              | 3,5                                      |
| 700200 - 2         | 1.89              | 27             | 3,5                                      |
| 700200 - 3         | 0.20              | 2              | 5  |
| 201404 - 1         | 4.46              | 88             | 5  |
| 201404 - 2         | 0.40              | 9              | 5  |



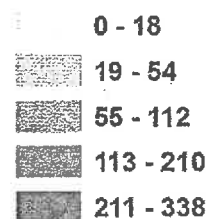
## Chickahominy Power Station | Tribal Populations % American Indian per Census Block Group

- ⊕ Proposed | Modeled Chickahominy Power Plant
- ⊕ C4GT Facility

Proximity Distances (Miles)



American Indian | Count



Source: ACS, Table B02010, Vintage 2012-16





**Spatial dispersion and concentration of modeled impacts:**

While previous report sections have addressed populations in proximity to the proposed project, this final section turns to modeled emission impacts derived from a series of AERMOD model runs for various criteria pollutants typical of gas-fired plants and infrastructure. The following table lists pollutants which have been modeled; additionally denoted in the table is a Yes/No determination of a concentrations reaching 'Significant Impact Levels' (SILs). In the case of a positive concentration, the turbine option that produced the concentration is noted, which for this particular project is always both.

| Pollutant | Averaging Period | SIL | Turbine Option          |
|-----------|------------------|-----|-------------------------|
| PM10      | 24-hour          | Yes | GE 7HA02 + MHPS M501JAC |
| PM2.5     | 24-hour          | No  | NA                      |
| PM2.5     | Annual           | No  | NA                      |
| NO2       | 1-hour           | Yes | GE 7HA02 + MHPS M501JAC |
| NO2       | Annual           | Yes | GE 7HA02 + MHPS M501JAC |
| CO        | 1-hour           | No  | NA                      |
| CO        | 8-hour           | No  | NA                      |
| SO2       | 1-hour           | No  | NA                      |
| SO2       | 3-hour           | No  | NA                      |
| SO2       | 24-hour          | No  | NA                      |
| SO2       | Annual           | No  | NA                      |

With concentrations reaching SILs, the applicant is required to conduct further model runs incorporating background sources. Specifically for the Chickahominy project, the SILs requiring further modeling are:

The modeling results for both turbine options indicate that the Project will have significant modeling impacts for NO2 (1-hour and annual) and PM10 (24-hour).

The resulting isopleths for each SILs concentration are shown on page 14 for both turbine combinations (extracted from Appendix G - Air Quality Impacts - Contour Map). It is clear from these cartographic outputs that concentrations will emanate outwards to the C4GT facility and across terrain shared by the C4GT facility; but like the larger report, these maps are quiet on the issue of both the extreme proximity and combined spatial distribution and concentration of both emission source points across all modeling scenarios. Further, while the application alludes to an Appendix F where background concentration sources would be listed, the currently posting shows Appendix F as a blank page.

While the applicant is required to maintain aggregated NAAQS and PSD Increment air quality thresholds - and claims to have shown ostensible capacity to do so via the modeling runs - that does not answer the critical question of significant adverse impacts to EJ populations in close proximity to both the C4GT and Chickahominy projects. In review of the project application and public comments, the concerns of this report are consistent with those of multiple parties - specifically the Sierra Club and Appalachian Voices, Et al. A few quotes from both comment letters demonstrate the significant, consistent concern over not only the extreme proximity of two very large gas-fired plants, but their potential to deliver adverse and disproportionate impacts on local EJ populations:

VDEQ recently proposed a permit for another gas-fired combined cycle power plant, the C4GT Charles City Combined Cycle Power Plant, which is planned to be located within a mile of Chickahominy. Given the proximity of these sources, it is imperative that the Charles City Power Plant's emissions be included in the cumulative modeling done for Chickahominy.

Clearly, the cumulative modeling for Chickahominy understated emissions from the C4GT combustion turbine generators and thus the cumulative NO2 analysis is significantly flawed, especially given how close these plants will be to each other.

...the cumulative NO2 NAAQS analysis is significantly flawed due to the failure to adequately model allowable short-term average NOX emissions from the nearby C4GT plant and the failure to model concurrent worst case NOX emissions from both the C4GT plant and Chickahominy.

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Further, the cumulative NAAQS analysis is deficient because Chickahominy Power failed to adequately model the nearby planned C4GT/Novi Energy combined cycle power plant.

The use of a proper background 1-hour NO<sub>2</sub> concentration is extremely important given how close the modeling of the Chickahominy plant when equipped with GE 7HA.02 turbines is to the 1-hour NO<sub>2</sub> NAAQS. Chickahominy Power reported a modeled concentration of 1-hour NO<sub>2</sub> of the plant with GE 7HGA.02 turbines of 180.23 µg/m<sup>3</sup>, which is almost 96% of the 1-hour NO<sub>2</sub> NAAQS of 188 µg/m<sup>3</sup>.

The proposed Chickahominy and C4GT facilities would be sited within one mile of each other, creating further potential for a localized pollution hotspot.

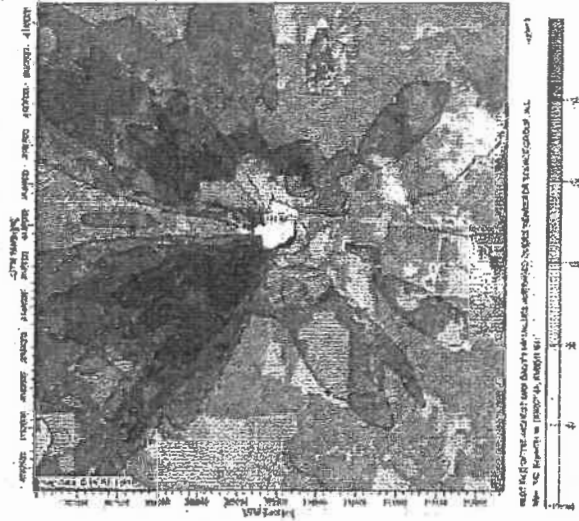
However, this analysis does not discuss the impact of the combined emissions within smaller geographic units or within the 1, 2, and 5 mile radii analyzed in the EJSCREEN.

No other analysis of the combined air pollution from the C4GT and Chickahominy facilities has been provided.

#### **Concluding Remarks:**

The size, proximity characteristics and current modeling deficiencies of the proposed Chickahominy Power Station application relative to EJ communities and indigenous peoples is grounds for a fuller, extended consideration of project impacts. Through this report, not only have the locations of EJ eligible geographies and peoples been ascertained in close proximity to the project, but the anomalous proximity of both the C4GT and Chickahominy projects within the national field of existing gas-fired projects has been determined. In the current application there is no quantification or spatial analysis of adverse and disproportionate air quality impacts on localized populations within the nearest project proximities. While the project may have been analyzed for aggregated regional standards as set forth by NAAQS and PSD, current modeling deficiencies - especially for the NO<sub>2</sub> criteria pollutant - point to an incomplete application that does not fully inform nor protect the public from localized adverse and disproportionate impacts. As such, the current application is incomplete and deficient, requiring fuller EJ impact analyses as well as the correction of modeling defects.

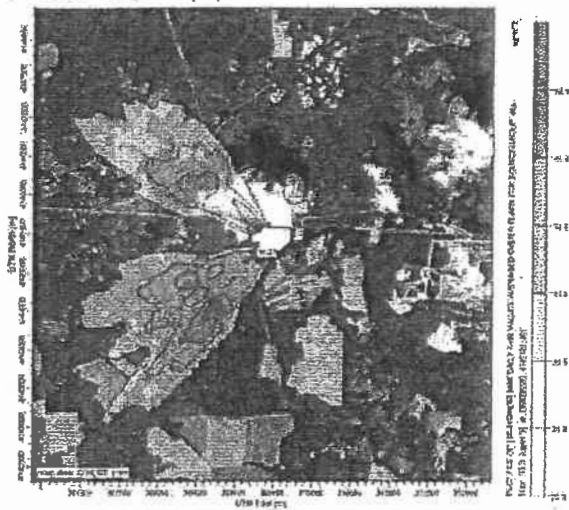
GE - 1 Hour NO2 SIL



GE Annual NO2 SIL



MHPS 1 - Hour NO2 SIL



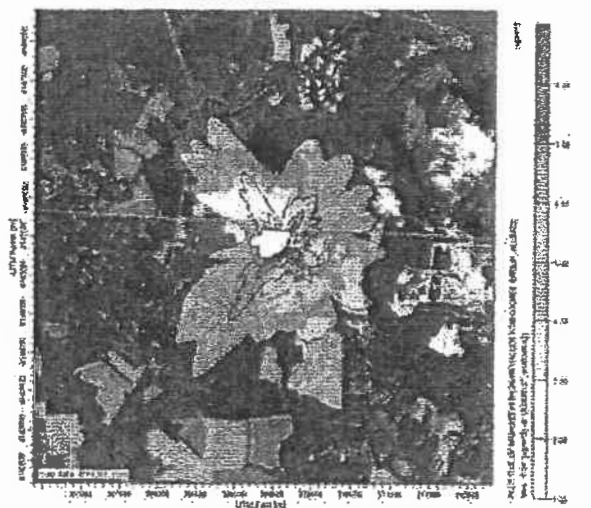
MHPS Annual NO2 SIL



GE 24 - Hour PM10 SIL



MHPS 24 - Hour PM10 SIL



References:

- DEQ Chickahominy Power Plant Application Page
- VDEQ project page
- Virginia Mercury | Author Sarah Vogelsson
- EPA Project Comments
- Applicant Engineering Report
- Chickahominy tribe VDEQ presentation
- Native Land Territories- Chickahominy
- CAGT Project Overview

# Appendix Three

## Deficiencies in the Virginia Department of Environmental Quality (V-DEQ) Public Engagement Processes Leading to Environmental Injustice during Permitting

Mary Finley-Brook, PhD

Department of Geography and the Environment, University of Richmond  
*Comments to the Air Pollution Control Board Committee on Public Engagement*  
September 13, 2019

These comments follow from close observation of Department of Environmental Quality (DEQ) permitting procedures across the past two years. I have more than two decades of experience researching public participation in environmental management decisions, particularly the energy sector.

Increasingly environmental racism and institutional racism makes the national and state news on a seemingly weekly basis. This is neither desirable nor tenable; resolution requires deep inquiry to guide intentional reform after decades of resistance to transparency and accountability from those who benefit from the status quo. The Air Pollution Control Board (APCB) *Committee on Public Engagement* provides an important opening for necessary and overdue reform. I implore you to work rigorously and ethically for the sake of the citizens of this commonwealth, who you represent, and whose wellbeing is directly impacted by your decision-making processes.

Below I cite demonstrated and factual deficiencies in current practices as well as achievable recommendations for restitution:

### Top Ten: DEQ's Public Engagement Shortcomings

- 1) Citizen input comes too late in the process when the parameters of the project and the permit are already firmly established. Late involvement means only small changes will be entertained, which violates the spirit and effectiveness of meaningful participation. Best practice recommends involvement of impacted citizens from the earliest stages of planning through the final steps of waste removal and decommissioning.
- 2) DEQ's methods of outreach (i.e., internet, newspaper) do not reach low-income populations or rural populations.<sup>1</sup> Many DEQ permits disproportionately harm poor families. Best practice requires deliberate attention to hear from marginalized populations with proven models for active stakeholder engagement. Lacking basic environmental justice training, DEQ staff regularly overlook vulnerable populations and passively use tools such as EJSCREEN in inappropriate ways.
- 3) The lack of environmental justice training in DEQ creates civil rights violations for African American communities as shown through an unethical willingness to cherry pick data such as with the misuse of EJSCREEN in Buckingham and Charles City Counties. Another telling example involved prioritization of aggregated census tract data in Union Hill to in effect erase impacted African American families. Remarkably this was done even after public comment from academic experts provided evidence from satellite and drone images and house-to-house surveys showing that significantly more residents lived proximate to the site than DEQ suggested and 83% were people of color.
- 4) The 30-day public comment period is not long enough for most citizens to learn all issues relevant to their health and safety, so they have a fair chance to articulate their best comment. Materials produced for public input are highly technical. In many instances, impacted populations hear about the project at the middle of the comment period often leaving less than

<sup>1</sup> See, for example, the details from the Chickahominy Power Station permitting decision on June 21, 2019 [https://www.deq.virginia.gov/Portals/0/DEQ/Air/Chickahominy\\_Power\\_Plant/Documents/52610\\_official\\_transcript\\_SAPCB\\_6-21-2019.pdf](https://www.deq.virginia.gov/Portals/0/DEQ/Air/Chickahominy_Power_Plant/Documents/52610_official_transcript_SAPCB_6-21-2019.pdf).

a week or two to review and comment on hundreds of pages of dense materials. This rushed process puts unfair burden on the public after the state enjoys months and on occasion years to assist the applicant to prepare materials. When impacted communities learn of projects with limited time to prepare and ask for more time so they can participate, DEQ suggests it is unfair to the applicant to have to wait for a permit!

- 5) DEQ staff advises the public not to go beyond narrow technical parameters of air or water permits when submitting comments. This directly undermines the ability of the Air Board and the Water Board to know the scope of problems. The Air Board must assess site suitability, economic ramifications, property implications and other fundamental issues that DEQ directly and repeatedly tells citizens is irrelevant and unnecessary to include in public comments.
- 6) DEQ does not open any forum to hear comprehensive concerns or issues that rise to the top for communities, like public health risks from cumulative exposures, safety, and wellbeing. Much public input addresses site suitability, whereas DEQ assumes all sites are suitable with local government approval. Thus there is a mismatch between the parameters for public input (narrow technical conditions) and the need felt in communities to address broader subjects like comprehensive risk and to have some power to decide what topics residents can speak to, especially when they feel their health and safety is placed in imminent danger.
- 7) The prioritization of DEQ permitting staff time to assist applicants limits the time available for community engagement. DEQ lacks sufficient funding to conduct meaningful public engagement as spending disproportionately favors the needs of project applicants. While firms have sufficient funds to pay for technical support in the private sector, they are confident of state support to revise and rewrite various rounds of poorly prepared draft permits. Meanwhile community members receive only a few hours of technical assistance at listening sessions.
- 8) Written replies to the public comments, summarizing and responding to the points raised during the 30-day period, provides DEQ staff with tight proximity to the process (i.e., a sense of ownership toward the work; professional interest in the success of approval), the ability to disqualify public concerns and thus undermine the validity of important evidence without opportunity for rebuttal. With the Buckingham Compressor Station permitting process, DEQ staff's unwillingness to consider or treat essentially any public concern submitted in comments provides ample evidence that the public engagement process is broken.<sup>2</sup>
- 9) According to hundreds of public comments, Virginians know state officials ignore methane impacts from fossil fuel infrastructure while advertising gas expansion as responsible; this contradiction creates animosity from many citizens of the commonwealth. Informed citizens become increasingly outspoken when they observe state officials intentionally disregard science, such as by ignoring a potent greenhouse gas. Providing accurate information on the climate impacts of infrastructure would reduce the intensity and frequency of frustrated outbursts during APCB hearings, likely leading to fewer removals of concerned citizens from decision-making forums at the hands of the abundant security hired by the state to quell public outrage. Instead of silencing citizens, the state could address why Virginians are angry.
- 10) DEQ is overstepping its mandate to serve as regulators in order to streamline and facilitate permit approvals. DEQ appears to lack sincere interest to resolve the above issues. Citizen boards should assure oversight and accountability, but board members do not have independent information or discussion spaces.

<sup>2</sup> See, for example, DEQ, Summary of and Response to Public Comments  
[https://www.deq.virginia.gov/Portals/0/DEQ/Air/BuckinghamCompressorStation/ADA\\_Attachment\\_F\\_-\\_21599\\_Response\\_to\\_Comments.pdf](https://www.deq.virginia.gov/Portals/0/DEQ/Air/BuckinghamCompressorStation/ADA_Attachment_F_-_21599_Response_to_Comments.pdf).

### Preliminary Recommendations for Improvement

- 1) The citizen APCB emerged before DEQ, created as an independent body. The Board needs to regain independence in order to assure rigor and accountability in the regulatory process.
- 2) DEQ should train all staff and administrators as well as the members of relevant citizen boards in environmental justice as well as diversity, equity and inclusion.
- 3) The APCB should collaborate with the Water Board and work more effectively with other agencies like the Department of Health and the Department of Transportation to understand and reverse harm done to marginalized and vulnerable populations, with particular attention to rural and urban hotspots.
- 4) Based in experience, including the constant threats of lawsuits, the APCB should recommend that the state pass environmental justice laws and regulations to assure clarity with accountability for civil rights. This reinforces commitment to the premises of fairness found in Virginia Code in the Commonwealth Energy Policy in Statute 11: "Ensure that development of new, or expansion of existing, energy resources or facilities does not have a disproportionate adverse impact on economically disadvantaged or minority communities."<sup>3</sup>
- 5) Authentic outreach to the public must occur from the initial planning stages through all permitting, including clear information and technical support to impacted resident even when they lack internet access (i.e., putting a large document in a library for a few weeks might meet legal standards for public notice, but does little to assure informed decision making).
- 6) Lengthen the public comment period from 30 days to 60 day with more technical support using materials in common language. Add a second public listening session (for people who did not speak at the first) for those who learn about the project later or need more time to prepare. Impacted citizens like those from Charles City should not be turned away from speaking at a hearing just because they did not know about a project in the 30-day window.
- 7) Improve measurement of methane leaks and emissions, with greater accountability and transparency, to reduce public ire at listening sessions.
- 8) DEQ should stop taking assets from taxpayers to mentor industry with poor draft permits through the regulatory process. This pattern is very clear in the first, second and third drafts of recently approved permits (i.e., Buckingham Compressor Station, Chickahominy Gas Plant).
- 9) When a particular project in effect targets vulnerable and marginalized groups with toxic infrastructure contributing tons of hazardous air pollutants (HAPs) and volatile organic compounds (VOCs), DEQ needs to go beyond EJ SCREEN. DEQ should learn how to do comprehensive environmental justice screening with time spent in the impacted community and establish ongoing engagement from a representative council of local advisors.
- 10) FOIA restrictions on how board members can communicate outside of meetings creates challenges for collaborative ongoing work between APCB meetings, so forming this committee is essential for deeper conversation and inquiry in a transparent public space. This APCB committee requires sufficient resources, support and time to do this important work.

As a citizen of this state, I ask this Air Board committee to use their independent power to protect our right to a clean and safe environment. We need leaders like each of you to work together to bring necessary change for the health and wellbeing of current and future Virginians.

<sup>3</sup> Virginia Code, Title 67 - Virginia Energy Plan, § 67-102, Commonwealth Energy Policy  
<https://law.justia.com/codes/virginia/2014/title-67/section-67-102/>.



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February 14, 2020

**BY ELECTRONIC MAIL**

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**Re: Draft Groundwater Withdrawal Special Exception Permit for the  
Chickahominy Power Station (No. GW0078700)**

Dear Chairwoman Wood, Members of the Board, Mr. Grist, and Director Paylor:

I offer the following comments on the draft groundwater withdrawal special exception permit for the Chickahominy Power Station (No. GW0078700). Specifically, I strongly request the State Water Control Board deny Chickahominy's application for the following reason:

Virginia Energy Policy (Code of Virginia § 67-101) energy objectives include "developing energy resources and facilities in a manner that does not impose a disproportionate adverse impact on economically disadvantaged or minority communities."

From the instructions of this Code, all my reasons to deny the permit follow.



**1. Erroneous EJScreen demographic data supported DEQ's decision not to undertake an Environmental Justice review, thus masking a majority minority impacted population.**

The Groundwater Withdrawal Special Exception Permit for the Chickahominy Power Station has allowed independent experts, including Stephen Metts of The New School, to peer review DEQ's demographic methods for this site and to expose their inaccuracies. I ask the Board to read Stephen Metts' *Chickahominy Power Plant Proposal - Independent Spatial and Demographic Analyses Findings Statement* dated June 4, 2019. This statement given in public comments provides methodological understanding about best practices when using census data for site pre-screening for environmental justice. Metts work gives factual evidence of the majority minority population who would be most significantly impacted by this power plant.

**2. Environmental Injustice is a root cause of rapid climate change and public health crises caused by environmental pollution.**

Environmental justice reviews, though mandated in the U.S. and elsewhere, have been poorly implemented by governmental agencies far more protective of the interests of fossil fuel developers. Since those with political power and voice are able to ensure toxic polluting infrastructure is not located where it will harm them or their interests, oil and gas infrastructure, coal mining, waste dumping, and nuclear waste sites are sited where poor and marginalized communities live, drink water, and breathe. Cumulatively, permit by permit, approvals such as this to allow toxic contamination of single drinking water sources, global off-loading of harms onto the less powerful while fossil fuel consumption continued unabated has achieved the climate crisis that impacts everyone.

Environmental justice is measured by cumulative impacts on marginalized people's and their disproportionate health impacts.

**3. Virginia cannot afford to have our shared water supplies endangered by new power plants.**

**4. The Chickahominy power plant is massive and not needed. The majority of Virginians and Americans in general want investment in cheaper renewables.**

**Erroneous Demographic Data and Environmental Justice review by DEQ masks minority majority impacted population**

I. Demographics play a significant role in every aspect of decision-making about the Chickahominy gas power plant, including how the population demography determines "site suitability," within the authority given to the State Water and Air Pollution Control Boards. The National Environmental Policy Act – NEPA Guidelines are quite clear on why it is important **not to engage in census tract only** demographic methods for environmental justice reviews. As a remedy for historic targeting of poor and minority communities and their cumulative impacts on health and community viability, NEPA EJ review was instituted to identify if a project will disproportionately impact a majority minority population living in the radii surrounding new toxic infrastructure development:

“Each Federal agency should analyze the environmental effects, including human health, economic, and social effects of Federal actions, including effects on minority populations, low-income populations, and Indian tribes. Agencies should consider the composition of the affected area to determine whether there may be disproportionately high and adverse human health or environmental effects on these populations. And recognize the interrelated cultural, social, occupational, historical, or economic factors that may amplify the natural and physical environmental effects of the proposed action. Agencies should develop effective public participation strategies.

“Agencies should identify a geographic scale for which they will obtain demographic information on the potential impact area. Agencies may use demographic data available from the Bureau of the Census ... [However] The fact that census data can only be disaggregated to certain prescribed levels (e.g., census tracts, census blocks) suggests that pockets of minority or low-income communities, including those that may be experiencing disproportionately high and adverse effects, may be missed in a traditional census tract-based analysis.

“Caution is called for in using census data due to the possibility of distortion of population breakdowns ... In addition to identifying the proportion of the population of individual census tracts that are composed of minority individuals, analysts should attempt to identify whether high concentration" pockets" of minority populations are evidenced in specific geographic areas ... The IWG guidance also advises agencies not to ‘artificially dilute or inflate’ the affected minority population.”<sup>1</sup>

On Nov. 9, 2018, at the Buckingham compressor station air permit hearing, Mr. Corbett of DEQ replied to a question about demographic methods used by DEQ: “We have the ability to go to a program that EPA puts out, called EJSCREEN. It's a screening mechanism. It's not -- **I wouldn't really rely on it.**”

EJ Screen is a software tool intended only for pre-screening at very earliest stages of a new toxic polluting facility development process. Comparing and contrasting the demographic methods used by my Union community study, when teams consisting of a local community elder & a student scribe went door to door week after week, month after month where they were known vs. DEQ's use of EJ Screen – was a focus by the 3-panel judges of the 4<sup>th</sup> Circuit Court. Chief Judge Gregory insisted the attorney for the State of Virginia accept that our door-to-door methods and their findings were the best means to arrive at accurate demographic data at project sites as part of site suitability considerations about environmental justice. He argued his conclusion is based on “commonsense.”

This commonsense is also based on decade after decade of analyses about the accuracy of census data in the United States, especially in communities where the majority of people have been historically discriminated against by virtue of their race or tribal nationality. To adjust to lower expectations about the accuracy of census data,

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<sup>1</sup> EPA-Final Guidance for Incorporating EJ Concerns in EPA's Compliance Analysis

NEPA guidelines state: "it should be noted that census data have been shown to be unreliable in some cases, in part because the level of aggregation may not offer a fine enough mesh to identify the existence of such communities. Also, census data are based on self-reporting. These data are not always consistent and are prone to undercounting minority populations and low-income populations due to a perceived reluctance for certain populations to divulge information (see Section 2.1.1, P. 35).<sup>2</sup>

In this decennial census year 2020, because federal funding is based on census numbers, and used to adjust representation in the U.S. House of Representatives, on Dec. 18, 2019, Governor Northam issued Executive Order 27 - the Virginia Complete Count Commission for the 2020 Census. EO 27 states, "Historically, the U.S. Census Bureau has experienced low survey response rates from many communities across the Commonwealth... with particular concerns for counting minority children."<sup>3</sup> This history of overall problems must be put together then with the specific issues identified by Stephen Metts when investigating DEQ's use of EJScreen for Chickahominy demographics. Scientific peer review is a necessary tool to guard against research biases based on vested economic interests of those with the power and access to manipulate findings. Stephen Metts performed peer review of my household community methods to validate the rural mailbox markers for inhabited homes we used as data points for mapping. When peer reviewing Dominion's mapping points, he found their findings were based on moving the compressor station's center-point one-half mile away from the construction center point Metts was given for the site. This action shifted the majority of households to white.

In Metts' Chickahominy demographic and spatial analyses cited above, he located the problems he found with the applicant's data:

On the issue of population density, again the current application is generally silent with little analysis. The only exception is the following declaration designed to narrowly contextualize the applicant's air modeling as 'conservative' relative to population density: ...the proposed Project site is located in a more rural area within a population density of 40 pop/mi<sup>2</sup> as compared to the location of the CO monitor, which has a population density in Henrico County of 1,313 pop/mi<sup>2</sup>. Here the applicant utilizes adjacent Henrico County with a much higher population density than the project county Charles City. However, this is not a particularly meaningful comparison beyond highly aggregated considerations as it does little to shed light on the distribution of population within the analysis proximities [6-4-2019, p4].<sup>4</sup>

Metts located a significant indigenous environmental justice issue:

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<sup>2</sup> Ibid

<sup>3</sup> <https://www.governor.virginia.gov/newsroom/all-releases/2018/december/headline-837267-en.html>

<sup>4</sup> [https://gist.github.com/VzPl/96d56d480fe1ca84820d53919a87058f?fbclid=IwAR3V1SEMypvIVp8hB\\_29Y64jySFyRtcL4MjC7ECJAaWGisZsgfLC65kXtSU](https://gist.github.com/VzPl/96d56d480fe1ca84820d53919a87058f?fbclid=IwAR3V1SEMypvIVp8hB_29Y64jySFyRtcL4MjC7ECJAaWGisZsgfLC65kXtSU)

An additional EJ issue based on geographic intersection is that of indigenous tribal lands. The project's namesake is indeed related to immediate geography - historical land belonging to the Chickahominy Tribe. While not a federally defined geography, the US Census designates this area as a State Designated Tribal Statistical Area (SDTSA) defined as follows: [SDTSAs] encompass a compact and contiguous area that contains a concentration of individuals who identify with a state recognized American Indian tribe and in which there is structured or organized tribal activity.

II. Please read Stephen Metts Chickahominy statement to understand better how DEQ's use of EJScreen must be treated with caution. In a prior DEQ case of using EJScreen's eleven indices of "vulnerability" for the Union Hill compressor station site air permit, DEQ provided misinformation as their demographic report on these findings. Dr. Ryan Emanuel (NC State University) found that DEQ had removed the first, summary, page of each of the eleven screens - all of which found that Union Hill was at a statistically significant level of majority vulnerability for all eleven when compared with the State average. Now, Stephen Metts finds that similarly large populations of minorities are being undercounted for the Chickahominy power plant. DEQ practices that seek to "hide" or "dilute" impacted populations of majority minority people must end. Preferably the State and its agency heads will adopt the methods for community study and geospatial evidence-gathering found to be far more accurate, and thus pre-screen investigate new toxic pollution source sites using NEPA guidelines rather than to side-step these.

The comment of Southern Environmental Law Center states the problem as such: "In responding to comments raising environmental justice concerns, DEQ noted that there were no economically disadvantaged environmental justice communities because income values within one, two, and five miles of the power station were above the average for the Commonwealth.<sup>5</sup> But without explanation, DEQ chose a different approach for identifying minority environmental justice communities. Instead of comparing minority populations to the average for the Commonwealth, it compared them to the average for Charles City County, in turn masking the disproportionate impacts of this facility on minority communities.<sup>6</sup> Had DEQ compared the minority population to the average for the *Commonwealth*, as it did for income levels, it would have concluded there was a minority environmental justice community" (4).

III. What is "level of aggregation" vis a vis geospatial population analysis and why does the scale matter? For the Union Hill compressor station site population, Dominion used the average person per square mile number for the entire county of Buckingham or 29.6 people. Thus, the "level of aggregation" was the average for this very rural county, which

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<sup>5</sup> Va. DEQ, Chickahominy Power Station Summary of and Response to Comments at 18 (June 21, 2019), [https://www.deq.virginia.gov/Portals/0/DEQ/Air/Chickahominy\\_Power\\_Plant/Documents/52610-001\\_summary\\_of\\_and\\_response\\_to\\_public\\_comments.pdf](https://www.deq.virginia.gov/Portals/0/DEQ/Air/Chickahominy_Power_Plant/Documents/52610-001_summary_of_and_response_to_public_comments.pdf).

<sup>6</sup> *Id.* ("all of the minority population values are below the average (52.8%) for Charles City County as a whole.").

erased the actual population at the site itself. The “ambient air quality” of the present Union Hill air was compared with the average for the entire state of Virginia. In both cases, the scale of the comparison erases the impacts on specific people “living and breathing in that place,” as Judge Gregory put it. Stephen Metts identifies that:

“As mapped, the Chickahominy and C4GT geography portends a significant outlier in scale and proximity. On page 3, a mapping of gas plant distribution across the contiguous US accompanied by just 4 plant pairings within 1.1 miles of each other featuring a combined output of > 2500 MW underscores the rarity of this scale of output in such close proximity. Further, this is within an already narrow field of just 219 (12.7%) plant pairings - regardless of combined MW output - occurring within 1.1 miles of each other. Should both plants be built as planned, they will join this extreme subset of plant pairings of atypical MW output coupled with extreme proximity [Metts, 2019:1]<sup>7</sup>

The problem of what scale of comparison is used is not only identified in the NEPA Guidelines above, but was raised by Chief Judge Gregory of the 4th Circuit Court, who made a point of underscoring this issue of scale. He emphasized that environmental justice reviews require comparisons of geographically local communities with minority of white majorities. That is, for the Union Hill air permit it is not the correct “scale” to compare the ambient air quality of a higher than average site with new toxic emissions from fossil fuel infrastructure to the average for the state of Virginia. Instead, those post-operational emissions must be compared with a majority white community that also enjoyed the high quality air and did not get targeted for these new emissions. Within the context of the water contamination issues of the majority African American residents of Flint, Michigan whose single source of drinking water was contaminated, environmental injustice is found by comparing that majority to another part of the city that is majority white. The Chickahominy special exemption permit must adhere to this standard of comparison.

**Environmental Injustice is a root cause of rapid climate change and public health crises caused by environmental pollution**

As Stephen Metts notes in his June 4, 2019 statement, the Chickahominy power plant project cannot be examined as a single facility. There are two power plants proposed extremely close to one another. “Should both plants be built as planned, they will join this extreme subset of plant pairings of atypical MW output coupled with extreme proximity” (6-4-2019, p. 1). The environmental impacts on water and contamination of water in extremely large water withdrawals is coupled with the air emissions and leaks associated with all fracked gas operations, from well-drilling to transmission by pipelines to compressor stations to power plants and LNG facilities. The chemicals that are used in fracking remain in the pipelines and all parts of processing of the gas. Thus, identifying the site of the Chickahominy gas power plant as an environmental justice population continues the disproportionate burden of environmental health impacts on minority and

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<sup>7</sup> Ibid

impoverished peoples that has created a public health crisis. No amount of benzene does not produce health impacts yet benzene is one of known carcinogens in fracked gas.

It is extremely important that the State Water Pollution Control Board become familiar with the many health conditions that accompany fracked gas operations into nearby communities. Respiratory and pulmonary illnesses, heart conditions, diabetes, and stroke, childhood asthma, and mental health conditions are among these.

Every year for six years, Physicians for Social Responsibility and New York Concerned Scientists have edited a compendium of the risks and harms of fracking (fracked gas well drilling, transmission through pipelines, compressor stations, power plants, and LNG facilities). Readers may find the entire 6<sup>th</sup> edition of the *Compendium of Scientific, Medical, and Media Findings of Harms and Risks of Fracking* here: <https://www.psr.org/wp-content/uploads/2019/06/compendium-6.pdf>

Under the health Impacts of Gas Power Plants, some notable findings are below:

June 28, 2015 – Pregnant women living near gas-fired power plants were more likely to give birth prematurely, according to a study of more than 400,000 infants born in Florida between 2004 and 2005. This study investigated associations between adverse birth outcomes and residential proximity to several types of power plants, including those burning oil, gas, and solid waste.<sup>8</sup>

October 20, 2011 – Emergency room visits and hospital admissions in elderly people living close to a new gas-fired power plant in Italy were counted and related to levels of air pollution both before and after the plants became operational. The results showed that ambient levels of nitrogen oxides and particulate matter rose after the plant started operations. Further, despite the fact that pollutants were below the limits set by the European legislation, there was a positive correlation between number of emergency room visits and daily concentrations of these air pollutants among nearby residents aged 70 or older.<sup>9</sup>

April 5, 2010 – Most new fossil fuel power plants are gas-powered. In this study, a research team estimated the number of premature deaths from fine particulate matter that would result from bringing 29 proposed fossil-fuel power plants in Virginia on line. Their modelling predicted that, were all 29 plants made operational, concentrations of fine particulate air pollution would rise in 271 counties across 19 states. Over a six-year

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<sup>8</sup> Ha, S., Hu, H., Roth, J., Kan, H., & Xu, X. (2015). Associations between residential proximity to power plants and adverse birth outcomes. *American Journal of Epidemiology*, 182(3), 215-224. doi: 10.1093/aje/kwv042

<sup>9</sup> Di Ciaula, A. (2012). Emergency visits and hospital admissions in aged people living close to a gas-fired power plant. *European Journal of Internal Medicine*, 23(2), e53-e58. Advance online publication. doi: 10.1016/j.ejim.2011.09.013

period, 104 cumulative excess deaths would occur due to operations of these proposed plants.”<sup>10</sup>

**Virginia cannot afford to have our water supplies endangered  
by new gas power plants**

The permit under review for the Chickahominy Power plant is to withdraw water for its operations. Please consider the health impacts and water contamination that would follow:

Repudiating industry claims of risk-free fracking, studies from across the United States present irrefutable evidence that groundwater contamination occurs as a result of fracking activities. of the more than 1,000 chemicals that are confirmed ingredients in fracking fluid, an estimated 100 are known endocrine disruptors, acting as reproductive and developmental toxicants. Adding to this mix are heavy metals, radioactive elements, brine, and volatile organic compounds (VOCs), which occur naturally in deep geological formations and which can be carried up from the fracking zone with the flowback fluid. As components of the fracking waste stream, these toxic substances also pose threats to surface water and groundwater.

A 2017 study found that spills of fracking fluids and fracking wastewater are common, documenting 6,678 significant spills occurring over a period of nine years in four states alone. In these states, between 2 and 16 percent of wells report spills each year. About five percent of all fracking waste is lost to spills, often during transport. Spills and intentional discharges of fracking waste into surface water have profoundly altered the chemistry and ecology of streams throughout entire watersheds, increasing downstream levels of radioactive elements, heavy metals, endocrine disruptors, toxic disinfection byproducts, and acidity, and decreasing aquatic biodiversity and populations of zooplankton and sensitive fish species, such as brook trout. Recent studies documenting changes in the bacterial flora in groundwater following drilling and fracking operations represent an emerging area of concern.”<sup>11</sup>

**The Chickahominy power plant is massive and not needed. The majority of Virginians and Americans in general want investment in cheaper renewables.**

I am very concerned to learn from Thomas Hadwin’s comment to this Board that the two power plant projects proposed in Charles City County will not require a SCC in-depth review about the need for either one, and certainly not both of these facilities. And, thus, the SCC cannot consider whether or not it is prudent to enter into this expense to our

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<sup>10</sup> Hermann, R. P., Divita Jr, F., & Lanier, J. O. (2010). Predicting premature mortality from new power plant development in Virginia. Archives of Environmental Health, 59(10). doi: 10.1080/00039890409605170

<sup>11</sup> <https://www.psr.org/wp-content/uploads/2019/06/compendium-6.pdf> P. 305.

water resources and to the health of those who depend upon them for life (2-4-20, p. 1).

How the state has allowed “merchant generators” of energy to evade SCC reviews required of an investor-owned utility is extremely short-sighted and biased toward those who do not provide consumer utility services. This represents a lack of protection of residents forced to bear all of the toxic burdens of these facilities without even the pretense of utility provision for their energy needs. Thomas also points out that these merchant generators have currently written a bill passing “through the 2020 General Assembly session that would exempt the Charles City County power plants from having to pay for RGGI allowances for the first three years of operation” (Ibid, p.3). Thus, this bill and the permit before us represent special pleading from corporate actors to evade the costs of the operations they will profit from!

When Dominion Energy decided not to build two power plants for the Atlantic Coast Pipeline because “renewables are cheaper,” the handwriting was on the wall. The majority of Virginians and Americans in general want renewable forms of energy infrastructure development to be given preferential treatment by our local, state, and national representative governments and agencies. And, even energy companies understand that domestic utilities are rapidly moving in that direction. Why then is Virginia’s DEQ helping merchant generators to profit from the water resources needed as drinking water for hundreds of thousands of people? Why then is Virginia’s DEQ performing demographic and EJ reviews that are biased towards merchant generators who have no responsibility at all to US consumers?

Especially under the circumstances in which we find ourselves in Virginia now: the U.S. Court of Appeals for the 4<sup>th</sup> District has underscored the authority of our state air and water control boards to closely consider site suitability, the economic impacts of the actions requested, and the reasonableness of the activity [for the site]. Please vote to deny this withdrawal exemption permit! There is no basis in Virginia law or policy that requires a corporate entity to profit by taking natural resources that are the very core of existence – our drinking water.

Very Sincerely,

*Lakshmi Fjord*

Founder, Convener, People’s Tribunal on Human Rights and Environmental Justice  
Impacts of Fracked Gas Infrastructure (ACP & MVP)  
Physicians for Social Responsibility, Climate Ambassador  
Visiting Scholar, Dept. of Anthropology, University of Virginia  
Council, Friends of Buckingham  
Historian, demographer, Union Hill Freedmen Family Historic District Project  
Coordinator, Pine Grove Project



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**Deny the Groundwater Withdrawal Special Exception for Chickahominy Power LLC GW0078700**

message

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kcfournel@aol.com <kcfournel@aol.com>

Fri, Feb 14, 2020 at 9:37 AM

o: withdrawal.permitting@deq.virginia.gov, joseph.grist@deq.virginia.gov

cc: Okcfournel@aol.com

February 14, 2020

Joseph Grist  
Department of Environmental Quality  
Central Office  
1111 E. Main Street, Suite 1400  
Richmond, VA, 23219

**RE: Deny the Groundwater Withdrawal Special Exception issued under the authority of the State Water Control Board for Chickahominy Power LLC**

APPLICANT NAME, ADDRESS AND SPECIAL EXCEPTION NUMBER: Chickahominy Power LLC; 13800 Coppermine Road, Suite 115, Herndon, Virginia 20171; GW0078700

NAME AND LOCATION OF WATER WITHDRAWAL: Chickahominy Power; 6721 Chambers Road, Charles City, Virginia.

As a resident of Charles City County, I ask that you **deny** the Environmental Special Exception for Chickahominy Power LLC. In fact, the vast majority of Charles City's 7,000 residents, who actually know about the Power Plant aren't in favor of this plant, or any other power plant being built in Charles City County. I bring to light the fact that County residents haven't been properly notified and informed about this project since its inception, and while we are coming to the table very late, we are here now.

As DEQ knows, the federal 4<sup>th</sup> Circuit Court totally repudiated DEQ's lack of methodology in evaluation environmental justice concerns and just recently reserved the DEQ air permit for the Union Hill case. As a result, DEQ should re-evaluate Chickahominy Power, LLC's water withdrawal permit and hold the permit application to be incomplete, directing the permittee to go back and

thoroughly assess environmental justice impacts as part of its application consistent with the Union Hill case, Friends of Buckingham vs State Air Pollution Control Board.

I would also like to address with the DEQ, the three member Charles City Board of Supervisors who are adamant that Charles City WANTS this and five other Power plants in the county. In the November 2019 election, one Board of Supervisors member wasn't reelected, one was reelected with a less than 14 percent margin and the third member had a write-in opponent that received nearly 9 percent of the vote in that district. The citizens of Charles City do not want the Chickahominy Power plant.

I reiterate part of my public comments at the January 28, 2020 Public Hearing. "A Special Exception is a permit for a use or structure that is not allowed as a matter of right." No one should have the right or authority to ravage our water supply (the Potomac Aquifer) nor pollute our air. The Declaration of Independence states our right to "Life, Liberty and the pursuit of Happiness," not the right for merchant fossil fuel plants to take an average of 82,192 gallons per day from our aquifers, equating to 30,000,000 gallons a year for 7 years for a total of 210,000,560 gallons. I ask that you deny the Environmental Special Exception for Chickahominy Power LLC.

And while this Charles City Power LLC Withdrawal Special Exception GW0078700 is for 7 years, we've been told that nothing prevents the company from applying for an additional special exception, something we have every expectation that they would do, given they have not gained approval from New Kent County for the water rights if this special exception is approved.

Virginia House of Delegates member Jerrauld Jones, summed it up perfectly in a letter to the Washington Post, "For too long, Virginia's energy decisions have been overwhelmingly dictated by our monopoly utilities, resulting in laws that too often favor utility profit at the expense of the public interest. To fix this, we must do more than just aggressively invest in renewable energy. We also need to reform our energy sector to stop the exploitation of Virginians...."

While Charles City County may still be relatively rural and one of the smaller counties in Virginia by population, our voices deserve to be heard. I reiterate another part of what I said at the DEQ meeting, "there are alternatives" for Charles City County, where we will all grow and prosper without risk of harm to anyone's health and water quality.

I ask that you deny this special exception.

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Thank you,

Chasity Roberts  
20000 Morris Creek Landing Rd

Charles City, VA 23030

Phone: 804-317-2537



OWS Water Withdrawal, rr &lt;withdrawal.permitting@deq.virginia.gov&gt;

## No Special Exception Water Permit For Chickahominy Gas Plant

1 message

**Joan Kasprovicz (joan.kasprovicz@gmail.com) Sent You a Personal Message**

Sat, Feb 8, 2020 at 7:44

&lt;automail@knowwho.com&gt;

PM

To: withdrawal.permitting@deq.virginia.gov

Dear Program Manager,

The majority of the residents in the area that would be affected depend on Wells for their water supply. If an exception is made for the Chickahominy Gas Plant and they are allowed to use millions of gallons of water, this will likely impact the reliability of the residents well water.

In addition - WHAT would the Gas Plant do with the resulting huge volume of waste water? What would happen to the quality of the ground water?

I DO NOT feel that a special exception is warranted and such an action would lead to harmful effects as a result. Thank You.

I am writing to request that your board deny the Special Exception for withdrawal of groundwater for the Chickahominy Gas Power Plant, as it is inadequate to protect the groundwater resources and public health of Virginians.

The applicant and DEQ have not demonstrated that the justification to ask for a special exception is an unusual situation in which requiring the user to get a permit would be contrary to the intended purpose of the groundwater management act. I am concerned with several factors of this project, including:

- The proposed beneficial use is not for human consumption
- The requested groundwater withdrawal is in an area that has incurred an overall decline in the Potomac Aquifer
- Viable alternative water sources will be available within 7 years
- Authorizing a withdrawal permit under these facts will be contrary to the intended purpose of the Act.

The applicant and DEQ have failed to demonstrate that no other sources of water supply are practicable. 9VAC 25-610-110 (D)(3)(a) of the Virginia code states that the applicant should submit an alternatives analysis demonstrating that all alternative sources other than groundwater were considered for use in the proposed activity. In addition the applicant should demonstrate that it has exhausted all practicable alternatives for the proposed activity. The department indicates that the applicant is in the midst of ongoing negotiations with New Kent county to provide water for the proposed Chickahominy gas power plant. This acknowledgement shows that there are other options available. The department believes connecting to New Kent County represents a viable long-term alternative for the power plant.

The applicant and DEQ have failed to evaluate potential impacts associated with climate change or groundwater resources. The study published by the Virginia Coastal Policy Center, Water Supply Planning in Virginia: "The Future of Groundwater and Surface Water in 2018," indicates that ?the Commonwealth should proceed with caution to avoid overusing this resource as the state of our climate and warming trends remains in flux.?

For these reasons, I respectfully request that the Water Board deny the special exception water withdrawal for the Chickahominy gas power plant.

Sincerely,

Joan Kasprovicz  
10704 Regency Forest Dr  
Vienna, VA 22181  
joan.kasprovicz@gmail.com  
(703) 620-1611

This message was sent by KnowWho, as a service provider, on behalf of an individual associated with Sierra Club. If you need more information, please contact Lillian Miller at Sierra Club at core.help@sierraclub.org or (415) 977-5500.

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OWS Water Withdrawal, rr &lt;withdrawal.permitting@deq.virginia.gov&gt;

**No Special Exception Water Permit For Chickahominy Gas Plant**

1 message

**Susan Schorin (willard@tulane.edu) Sent You a Personal Message**

Sun, Feb 9, 2020 at 1:48

&lt;automail@knowwho.com&gt;

PM

To: withdrawal.permitting@deq.virginia.gov

Dear Program Manager,

I am writing to request that your board deny the Special Exception for withdrawal of groundwater for the Chickahominy Gas Power Plant, as it is inadequate to protect the groundwater resources and public health of Virginians.

The applicant and DEQ have not demonstrated that the justification to ask for a special exception is an unusual situation in which requiring the user to get a permit would be contrary to the intended purpose of the groundwater management act. I am concerned with several factors of this project, including:

- The proposed beneficial use is not for human consumption
- The requested groundwater withdrawal is in an area that has incurred an overall decline in the Potomac Aquifer
- Viable alternative water sources will be available within 7 years
- Authorizing a withdrawal permit under these facts will be contrary to the intended purpose of the Act.

The applicant and DEQ have failed to demonstrate that no other sources of water supply are practicable. 9VAC 25-610-110 (D)(3)(a) of the Virginia code states that the applicant should submit an alternatives analysis demonstrating that all alternative sources other than groundwater were considered for use in the proposed activity. In addition the applicant should demonstrate that it has exhausted all practicable alternatives for the proposed activity. The department indicates that the applicant is in the midst of ongoing negotiations with New Kent county to provide water for the proposed Chickahominy gas power plant. This acknowledgement shows that there are other options available. The department believes connecting to New Kent County represents a viable long-term alternative for the power plant.

The applicant and DEQ have failed to evaluate potential impacts associated with climate change or groundwater resources. The study published by the Virginia Coastal Policy Center, Water Supply Planning in Virginia: "The Future of Groundwater and Surface Water in 2018," indicates that "the Commonwealth should proceed with caution to avoid overusing this resource as the state of our climate and warming trends remains in flux."

For these reasons, I respectfully request that the Water Board deny the special exception water withdrawal for the Chickahominy gas power plant.

Sincerely,

Susan Schorin  
108 Queen St  
Alexandria, VA 22314  
willard@tulane.edu  
(703) 683-8404

This message was sent by KnowWho, as a service provider, on behalf of an individual associated with Sierra Club. If you need more information, please contact Lillian Miller at Sierra Club at core.help@sierraclub.org or (415) 977-5500.

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## Turn Down ALL Water Use Permits

To whom this may concern,

My name is Bryant Wheeler, I am a resident of Charles City, Virginia. More so, I live on this planet that we are destroying. I have been in construction industry for 43 years, thirty as a general contractor, currently as Principal and Vice President of PolycreteUSA, a commercial insulating concrete forming system. I have built structures up and down the East Coast out to the Mississippi and beyond. I am all about Green building practices and building these two extremely large gas-fired electric power plants in Charles City is not Green.

The things I have seen done in other states? in the name of progress would make your toenails curl. I have seen Townships become ghost towns because the water and earth became unsustainable for human life. I have seen where children can no longer play outside because of what the EPA and federal government have allowed to take place, all in the name of profits and greed. Where lobbying outweighs health and human safety. Where large corporations and/or wealthy shareholders hide behind fictitious names, so the public never knows who is destroying their lives. I have watched large polluters, over and over again, move into small, poor, under-educated, often minority communities, whose local supervisors are too unequipped to know what they have gotten their town or county into. Because the elected officials - the people's representatives did not know enough to do their homework or seek advice instead, for whatever reasons, they swallow hook, line and sinker what they are being told by the corporate henchmen. I have watched State, federal and local officials turn their heads and cover their eyes to allow this to happen.

NOW it is our turn.

Now Charles City is the new target for TWO unnecessary, for-profit, fracked-gas electric POWER PLANTS. We, the citizens of Charles City, were kept in the dark up to the middle of 2019 when we received an email from the Sierra club informing us of a meeting that one young woman organized. It was about the largest gas power plant in Virginia being shoved down our throat. There were about thirty people at this meeting with only two days-notice. Think how many more would have been involved if we were properly informed back in 2014 when this all started. Hell, they may even have found someone with the intelligence to tell the BOS to do the research that should have been done.

In this meeting we were overpowered by the county BOS Bill Coad. Not the organizers. We were told lies and mis-information and still are. We are still being told that it is a "done deal." IT IS NOT. See, Mr. Coad is a very loud person and, possibly not knowing, bullies the room. None of the County officials did any third-party research. Never sought a third-party expert to help inform them or protect the county. Apparently, there are funds to hire a public relations person to try to sell county residents on the sham process, but not to hire an environmental consultant. I am sure this is why it is likely that Balico chose Charles City after the first conversation with our

county officials, when all the silver and gold was falling into their bewildered eyes. SO, WE SUFFER.

The Air Pollution Control Board was also a very unfair hearing. They knew and understood we had only just found out about this power plant, but did they allow us to speak? NO. This was a performance like no other - one sided, full of UN-truths lacking facts and apparently even Balico did not have what they were asked to bring to this meeting and they shoved the permit through anyway. And now we are looking at the final permit through the DEQ and the Water Pollution Control Board.

Balico plans to pull a massive amount of water, 10 million gallons per year, from the Potomac Aquifer that is already depleted and dropping every day. We are told that sucking this extremely large amount of water from two wells will only affect an area (diameter) of 450' around each well, according to their modeling. I want to see that math. The way I see this is, if you pull this extremely large amount of water out we will need to figure out how that water is going to get back into the reservoir. We also must look at the fallout from air. It has the potential to contaminate the air and GROUND WATER [wells], especially closest to the plant, We must look at the water used to cool the stacks and what will happen with this contaminated water? It will contain all types of air pollution in the in the wastewater. We are told that it will go to the county's Roxbury Treatment Plant. I can't seem to get an answer if they are equipped to treat and filter all these dangerous chemicals and contaminants. Isn't this something the Water Control Board should consider with this permit?

We also know that if our wells become contaminated, we must prove that it was caused by the power plant. Well, this kind of takes us back to the beginning. You've seen people who have flaming water from their faucets or unusable land are still fighting for what they lost. We know they will never win against these giant corporations. One man was told he should have tested his water no more than three months prior to the plant's construction so the judge would have a baseline to go by should it go to court. Is that true? No one is officially saying how we need to protect ourselves about this. Do we have to pay for that documentation? Are you going to protect us if we lose our water and therefore, our home?

A personal concern is that my wife is recovering from Stage 4 small cell lung cancer and when I showed her doctor [ oncologist ] the air pollutants that the DEQ gave us that will be emitted, he did his own research and said if the plant comes here we need to move away.

Is this what the Water Board and the DEQ wants to do to us, the people of Charles City County? WHERE does this stop?

Bryant J Wheeler  
10601 Shady Lane, Charles City, VA.



Mr. Joseph Grist  
Office of Water Supply  
Virginia Department of Water Quality  
P.O. Box 1105  
Richmond, VA 23219

January 28, 2020

Dear Mr. Grist, Mr. Paylor and Members of the State Water Control Board:

In regard to the application # GW0078700 by:  
Chickahominy Power, LLC  
13800 Coppermine Road, Suite 115  
Herndon, VA 20171

To withdraw water at:  
Chickahominy Power  
6721 Chambers Road  
Charles City, Virginia

As a 40 year resident of Charles City County I am very concerned about the proposal by DEQ to to issue a seven year Special Exception to the Groundwater Management Act of 1992 (that requires a permit to withdraw 300,000 gallons or more of groundwater in any one month) as requested by Chickahominy Power. I am specifically concerned that:

- 1) A 30 million gallon annual water withdrawal by a commercial venture from the Potomac Aquifer, in addition to already permitted withdrawals, may further unsustainably deplete the aquifer.
- 2) Substantially lowered water levels may occur in neighboring wells that may not be reflected in DEQ modeling.
- 3) Chickahominy Power holds a contract to receive already permitted water withdrawals from the County of New Kent, DEQ Permit #GW0006700. There is no specified contract renewal option and this agreement expires April 30, 2024. This is likely less than four years from the potential approval of a Special Exception by DEQ.
- 4) Chickahominy Power, represented by J.E. (Jeff) Freeman, Jr., Director—Development, Balico, LLC, publicly stated on October 28, 2019, that plant construction would take up to 38 months. This likely will extend to at least late mid- 2023, less than eight months before the New Kent water agreement expires.
- 5) The seven year timeline presented and purported to be required by Chickahominy is unreasonably excessive. On August 27, Bowman Consulting, representing Chickahominy Power, submitted a statement from Chickahominy that a 10 year timeline was required "to coincide with the requirements of funding institutions." And, on September 9, 2019, Bowman Consulting submitted a timeline purporting to show that seven years would be required to complete a waterline extending to New Kent. However, on December 6, 2019, VA Natural Gas submitted to the State Corporation Commission, Case No. PUR-2019-00207, to construct a \$1/3 billion pipeline expansion to serve the C4GT plant <<http://www.scc.virginia.gov/docketsearch#caseDocs/140343>>. According to VNG, the Chickahominy plant has not requested a gas supply. The C4GT request includes: "Mechanicsville Parallel Pipe - construct approximately 14.6 miles of 30" diameter steel pipeline in new right-of-way that runs parallel and adjacent to the Company's existing VNG Lateral Pipeline ("VNG Lateral") in the Counties of Hanover, New Kent and Charles City, Virginia". This section would cross the Chickahominy River, State Route 60, CSX rail lines, other roadways, and require easements, similar to the Chickahominy plant water line. The entire VNG project completion date requested is December, 31, 2022, or less than three years to accomplish essentially the same planning, design, permitting and construction as required by Chickahominy—that pleads for seven years.
- 6) The lengthy timeline presented by Chickahominy, without an assured New Kent agreement extension, and without demonstrating substantial water line work underway—though fully permitted since June 24, 2019—suspiciously suggests the possibility of a future request by Chickahominy for less costly, permanent, on-site ground water withdrawal. A future request that DEQ may be unwilling, and perhaps politically unable, to deny in 2027 with a \$1.4 billion plant investment already constructed and producing electricity for commercial interests.

I request that DEQ deny this request for a proposed Special Exception.

Sincerely,

Steve Fuhrmann  
3400 Adkins Road  
Providence Forge, VA 23140-2431  
Phone: 804-966-566  
Email: [steve.louise@verizon.net](mailto:steve.louise@verizon.net)

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OWS Water Withdrawal, rr &lt;withdrawal.permitting@deq.virginia.gov&gt;

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**Regarding GW0078700: Deny this Special Exemption**

1 message

**Laura Haden** <lauraestellehaden@gmail.com>

Thu, Feb 13, 2020 at 10:37 AM

Reply-To: Laura Haden &lt;lauraestellehaden@gmail.com&gt;

To: "Mr. Joseph Grist" &lt;withdrawal.permitting@deq.virginia.gov&gt;

Dear Mr. Grist and Mr. Paylor,

I am writing in regards to the Chickahominy Power LLC application, 13800 Coppermine Rd Ste 115, Herndon VA 20171; GW0078700. I am writing to express my concerns about the special exception to the Groundwater Management Act requested by Chickahominy Power. I'm worried that extending this exception to Chickahominy will put a strain on the Potomac aquifer, which has already experienced a level drop in various areas. It doesn't seem fair that this plant could receive an exception when other industries and residents are being asked to cut back on water usage. This places a disproportionate burden on communities of color and low-income residents.

For these reasons, I believe the DEQ should deny this special exception.

Thank you for your time!

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OWS Water Withdrawal, rr &lt;withdrawal.permitting@deq.virginia.gov&gt;

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**Permit - Chickahominy Power - Charles City**

1 message

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**Lynda Cooke** <cooke.lynda1@gmail.com>  
To: withdrawal.permitting@deq.virginia.gov

Thu, Feb 13, 2020 at 9:24 AM

Dear Mr. Grist and Board Members,

Thank you for the opportunity to write on this subject.

I am writing to request your approval of the water withdrawal request submitted by Chickahominy Power.

I believe bringing this operation on line will be beneficial for the locality and the greater regional area.

This project will allow Virginia to retire aging and more polluting operations and spread reliable energy production over a greater network of facilities. Diversity in type, location and operator ownership promotes a stronger network not dependent on single source, or seen or unforeseen limiting factors which may arise.

I believe your department has adequately reviewed this request and has addressed the concerns posed with adequate safeguards. I appreciate the effort to go the extra mile to let all interested parties provide input.

Sincerely,

Lynda A. Cooke

5701 Monguy Road

Charles City, VA 23030

804-829-6308

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OWS Water Withdrawal, rr &lt;withdrawal.permitting@deq.virginia.gov&gt;

## Comment on Chickahominy Special Exception GW0078700

1 message

Elizabeth A Kreydatus &lt;eakreydatus@vcu.edu&gt;

Wed, Feb 12, 2020 at 1:54 PM

To: "OWS Water Withdrawal, rr" &lt;withdrawal.permitting@deq.virginia.gov&gt;, Joseph Grist &lt;joseph.grist@deq.virginia.gov&gt;

I would like to submit a comment in regards to the Chickahominy Power LLC application, GW0078700. I am writing to express my concerns about the special exception to the Groundwater Management Act requested by Chickahominy Power.

- I am concerned that extending this exception to Chickahominy will put a strain on the Potomac aquifer, and it doesn't seem fair that this plant could receive an exception when other industries and residents are being asked to cut back on water usage. It appears, by the DEQ's own reckoning, that Charles City and many surrounding localities are facing water shortages. Language in a 2016 JLARC Report to the Governor and GA of Virginia explained, "Even with recent reductions, maintaining groundwater sustainability will be difficult" (p. 11). It is outrageous to deliberately permit an unnecessary power generation facility (a merchant plant which is intended to generate private profits for investors, rather than serve the evident needs of Virginia citizens) to extract 30 million gallons of water annually from a strained aquifer.
- I believe that the modeling presented by the DEQ is inadequate. We are in a climate crisis, and rainfall and temperatures in recent years has been shockingly unpredictable. It is outrageous to encourage more polluting gas plants to use our water supplies and risk overuse of the Potomac aquifer, endangering water access for area residents with wells and all users of this aquifer. The same JLARC report cited in the bullet above acknowledged, "Data, estimates, and state's approach limit the reliability of surface water sustainability predictions" (p. 18). Residents in Charles City and Varina expressed concern that previous modeling had ensured them they'd be safe when route 895 and 295 were constructed, but despite those assurances from state officials, many residents discovered that their wells were strained or even ran out. Given this history, and the stakes of this particular permit, it is important that the DEQ acknowledge the significant consequences of failed predictive modeling.
- I believe that the DEQ and county officials committed an act of environmental injustice when they granted the Chickahominy gas plant its prior permits. Community members in Charles City and Varina, and especially the African American community, were not notified or involved in that process. The vast majority of area residents only learned of the gas plant two days before the State Air control board met to vote on the air permit. While the state would like to imply that they weren't involved because they didn't care, in the days before the Air Board, hundreds of those residents signed petitions and worked to organize a community group, Concerned Citizens of Charles City County (C5), to demand a fair, transparent process. However, the state has entirely shut this growing community movement out of their process.
- This gas plant, if it receives its water permits, will disproportionately pollute the air and water of African American and Native American residents, while the profits will go to investors who live far from Charles City. DEQ's actions repeat their missteps in Union Hill, and permitting the Chickahominy Gas Plant is an act of environmental justice. As the 4th Circuit Court asserted, "the Board erred in failing to assess the Compressor Station's potential for disproportionate health impacts on the predominantly African-American community of Union Hill, and in failing to independently evaluate the suitability of that site." Residents of the Roxbury Road corridor in Charles City County, a majority minority county, will face disproportionate health impacts from the two gas plants (sited within a couple of miles of a landfill) should this permit be granted. Additionally, the gas plants will be within five miles of Varina, a predominantly black region within Henrico County.

In sum, I believe the DEQ should deny this special exception.

Thanks for your time,

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**Beth Kreydatus**

Associate Professor  
Department of Focused Inquiry  
University College  
Virginia Commonwealth University  
Pronouns: she, her, hers

1015 Floyd Avenue  
Grace E. Harris Hall  
Room 5145  
Box 842015  
Richmond, VA 23284-2015  
eakreydatus@vcu.edu

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To : Mr. Joseph Grist  
Office of Water Supply  
Virginia Department of Environmental Quality  
PO Box 1105, Richmond, VA 23219

Date: 1/28/2020

Dear Mr. Grist, Mr. Paylor and Members of the Water Control Board::

I am writing in regards to the Chickahominy Power LLC application, 13800 Coppermine Rd Ste 115, Herndon VA 20171; GW0078700. I am writing to express my concerns about the special exception to the Groundwater Management Act requested by Chickahominy Power. I am specifically concerned about:

The water levels & quality of water throughout our County, the pollution of the air in our County, and the reintroduction of Repeat Pollution in the James River

I believe the DEQ should deny this special exception.

Thank you for your consideration.

Sincerely,

*Alicia M. Ghee*

( Your signature)

Citizen name

Alicia M. Ghee  
( Please print)

Your Telephone

(804) 829 5424

Your Street Address

10341 Roxbury Rd

City/ State/ Zip

Charles City, VA. 23030

(Your Mailing address ( if different): \_\_\_\_\_)

(City/State/Zip \_\_\_\_\_)

\*In using this form letter please be sure to provide ALL requested information.

\*Attach additional pages if more space is needed to express your concerns. \*Please return completed form letters to a member of C5 at this meeting or before Feb 10 so we can submit it on your behalf.

\*Alternatively, you can send a letter directly to the address above, or scan and/ or email your comments to [withdrawal.permitting@deg.virginia.gov](mailto:withdrawal.permitting@deg.virginia.gov)

\* Note the deadline for DEQ to receive comments is Feb 14.

Thank you for taking time to comment upon this important matter!!! ~C5

To : Mr. Joseph Grist  
Office of Water Supply  
Virginia Department of Environmental Quality  
PO Box 1105, Richmond, VA 23219

Date: June 28, 2020

Dear Mr. Grist, Mr. Paylor and Members of the Water Control Board::

I am writing in regards to the Chickahominy Power LLC application, 13800 Coppermine Rd Ste 115, Herndon VA 20171; GW0078700. I am writing to express my concerns about the special exception to the Groundwater Management Act requested by Chickahominy Power. I am specifically concerned about:

I have serious concerns about the  
pollution of our water and  
the reduction of our water  
for our homes,

I believe the DEQ should deny this special exception.

Thank you for your consideration.

Sincerely,

Brenda W. Crawley

( Your signature)

Citizen name Brenda W. Crawley  
( Please print)

Your Telephone (804) 829-2248

Your Street Address 5530 W. Run Road

City/ State/ Zip Charles City, VA 23030

(Your Mailing address ( if different): \_\_\_\_\_)

(City/State/Zip \_\_\_\_\_)

\*In using this form letter please be sure to provide ALL requested information.

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\*Alternatively, you can send a letter directly to the address above, or scan and/ or email your comments to [withdrawal.permitting@deq.virginia.gov](mailto:withdrawal.permitting@deq.virginia.gov)

\* Note the deadline for DEQ to receive comments is Feb 14.

Thank you for taking time to comment upon this important matter!!! ~C5

To : Mr. Joseph Grist  
Office of Water Supply  
Virginia Department of Environmental Quality  
PO Box 1105, Richmond, VA 23219

Date: 1/28/2020

Dear Mr. Grist, Mr. Paylor and Members of the Water Control Board::

I am writing in regards to the Chickahominy Power LLC application, 13800 Coppermine Rd Ste 115, Herndon VA 20171; GW0078700. I am writing to express my concerns about the special exception to the Groundwater Management Act requested by Chickahominy Power. I am specifically concerned about:

The air quality in this area,  
Pollution, how it will affect water  
level in well as well as how  
it will affect health of citizens of County

I believe the DEQ should deny this special exception.

Thank you for your consideration.

Sincerely,

Jasper Charity

(Your signature)

Citizen name Jasper CHARITY  
(Please print)

Your Telephone (804) 829 2925

Your Street Address 8341 ROXBURY RD

City/ State/ Zip Charles City VA 23030

(Your Mailing address (if different): \_\_\_\_\_)

(City/State/Zip \_\_\_\_\_)

\*In using this form letter please be sure to provide ALL requested information.

\*Attach additional pages if more space is needed to express your concerns. \*Please return completed form letters to a member of C5 at this meeting or before Feb 10 so we can submit it on your behalf.

\*Alternatively, you can send a letter directly to the address above, or scan and/ or email your comments to [withdrawalpermitting@deq.virginia.gov](mailto:withdrawalpermitting@deq.virginia.gov)

\* Note the deadline for DEQ to receive comments is Feb 14.

Thank you for taking time to comment upon this important matter!!! -C5



To : Mr. Joseph Grist  
Office of Water Supply  
Virginia Department of Environmental Quality  
PO Box 1105, Richmond, VA 23219

Date: 1/28/2020

Dear Mr. Grist, Mr. Paylor and Members of the Water Control Board::

I am writing in regards to the Chickahominy Power LLC application,  
13800 Coppermine Rd Ste 115, Herndon VA 20171; GW0078700. I am writing to express my concerns  
about the special exception to the Groundwater Management Act requested by Chickahominy Power. I  
am specifically concerned about:

The air quality in this area, pollution,  
water level in well and  
pollution of water as well as how  
this will affect health of citizens

I believe the DEQ should deny this special exception.

Thank you for your consideration.

Sincerely,

Lillian Charty

( Your signature)

Citizen name

Lillian Charty  
( Please print)

Your Telephone ( 804 ) 829-2925

Your Street Address 8341 Roxbury Rd

City/ State/ Zip Charles City VA 23030

(Your Mailing address ( if different): \_\_\_\_\_)

(City/State/Zip \_\_\_\_\_)

\*In using this form letter please be sure to provide ALL requested information.

\*Attach additional pages if more space is needed to express your concerns. \*Please return completed  
form letters to a member of C5 at this meeting or before Feb 10 so we can submit it on your behalf.

\*Alternatively, you can send a letter directly to the address above, or scan and/ or email your comments  
to [withdrawal.permitting@deg.virginia.gov](mailto:withdrawal.permitting@deg.virginia.gov)

\* Note the deadline for DEQ to receive comments is Feb 14.

Thank you for taking time to comment upon this important matter!!! ~C5

To : Mr. Joseph Grist  
Office of Water Supply  
Virginia Department of Environmental Quality  
PO Box 1105, Richmond, VA 23219

Date: 1/27/2020

Dear Mr. Grist, Mr. Paylor and Members of the Water Control Board::

I am writing in regards to the Chickahominy Power LLC application, 13800 Coppermine Rd Ste 115, Herndon VA 20171; GW0078700. I am writing to express my concerns about the special exception to the Groundwater Management Act requested by Chickahominy Power. I am specifically concerned about:

the water supply and effects on the  
environment.

I believe the DEQ should deny this special exception.

Thank you for your consideration.

Sincerely,

*Kenley Adkins*

( Your signature)

Citizen name Kenley Adkins  
( Please print)

Your Telephone (804) 929-5434

Your Street Address 10631 Shady Lane

City/ State/ Zip Charles City, VA 23030

(Your Mailing address ( if different): \_\_\_\_\_)

(City/State/Zip \_\_\_\_\_)

\*In using this form letter please be sure to provide ALL requested information.

\*Attach additional pages if more space is needed to express your concerns. \*Please return completed form letters to a member of C5 at this meeting or before Feb 10 so we can submit it on your behalf.

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\* Note the deadline for DEQ to receive comments is Feb 14.

Thank you for taking time to comment upon this important matter!!! ~C5

To : Mr. Joseph Grist  
Office of Water Supply  
Virginia Department of Environmental Quality  
PO Box 1105, Richmond, VA 23219

Date: 1-26-2020

Dear Mr. Grist, Mr. Paylor and Members of the Water Control Board::

I am writing in regards to the Chickahominy Power LLC application,  
13800 Coppermine Rd Ste 115, Herndon VA 20171; GW0078700. I am writing to express my concerns  
about the special exception to the Groundwater Management Act requested by Chickahominy Power. I  
am specifically concerned about:

The decreased water levels  
keeping disturbance  
in the James River

I believe the DEQ should deny this special exception.

Thank you for your consideration.

Sincerely,



(Your signature)

Citizen name Russell A. Smith Jr  
(Please print)

Your Telephone (504) 677-2997

Your Street Address 5100 John Tyler Mem. Hwy.

City/ State/ Zip CHARLES CITY, VA 23030

(Your Mailing address (if different): 9556 Roundstone Rd

(City/State/Zip Herndon, VA 22031

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form letters to a member of C5 at this meeting or before Feb 10 so we can submit it on your behalf.

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Thank you for taking time to comment upon this important matter!!! ~C5

To : Mr. Joseph Grist  
Office of Water Supply  
Virginia Department of Environmental Quality  
PO Box 1105, Richmond, VA 23219

Date: 1/26/2020

Dear Mr. Grist, Mr. Paylor and Members of the Water Control Board::

I am writing in regards to the Chickahominy Power LLC application, 13800 Coppermine Rd Ste 115, Herndon VA 20171; GW0078700. I am writing to express my concerns about the special exception to the Groundwater Management Act requested by Chickahominy Power. I am specifically concerned about:

water access, popu-  
lation, and the extended  
long term condition that  
it all will effect the population

I believe the DEQ should deny this special exception.

Thank you for your consideration.

Sincerely,



( Your signature)

Citizen name Laurie Adkins  
( Please print)

Your Telephone 804 5829-5434

Your Street Address 10631 Shady Ln

City/ State/ Zip Charles City Va 23030

(Your Mailing address ( if different): Same)

(City/State/Zip \_\_\_\_\_)

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To : Mr. Joseph Grist  
Office of Water Supply  
Virginia Department of Environmental Quality  
PO Box 1105, Richmond, VA 23219

Date: 1/26/2020

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I am writing in regards to the Chickahominy Power LLC application, 13800 Coppermine Rd Ste 115, Herndon VA 20171; GW0078700. I am writing to express my concerns about the special exception to the Groundwater Management Act requested by Chickahominy Power. I am specifically concerned about:

I believe that there will be  
unclean water and very bad  
for the environment.

I believe the DEQ should deny this special exception.

Thank you for your consideration.

Sincerely,

Christopher C. Marrow, Jr

(Your signature)

Citizen name Christopher C. Marrow, Jr.  
(Please print)

Your Telephone 804 1829 57653

Your Street Address 10701 Sturgeon Pt. Rd

City/ State/ Zip Charles City, Va 23036

(Your Mailing address ( if different): \_\_\_\_\_)

(City/State/Zip \_\_\_\_\_)

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Office of Water Supply  
Virginia Department of Environmental Quality  
PO Box 1105, Richmond, VA 23219

Date: 1/26/2020

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I am writing in regards to the Chickahominy Power LLC application,  
13800 Coppermine Rd Ste 115, Herndon VA 20171; GW0078700. I am writing to express my concerns  
about the special exception to the Groundwater Management Act requested by Chickahominy Power. I  
am specifically concerned about:

I believe this gas plant will  
affect our water, Air and quality of life  
We are a small community, by bring  
this plant, it will only damage our way of  
living. People already have so many problems health wise this will  
only make it worse. I AM  
AGAINST this Plant coming to  
Charles City.

I believe the DEQ should deny this special exception.

Thank you for your consideration.

Sincerely,

Frances Jefferson

(Your signature)

Citizen name Frances Jefferson  
(Please print)

Your Telephone (804) 829 5035

Your Street Address 10731 Barnetts Road

City/ State/ Zip Charles City, VA 23030

(Your Mailing address (if different): \_\_\_\_\_)

(City/State/Zip \_\_\_\_\_)

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Office of Water Supply  
Virginia Department of Environmental Quality  
PO Box 1105, Richmond, VA 23219

Date: 1-27-2020

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I am writing in regards to the Chickahominy Power LLC application, 13800 Coppermine Rd Ste 115, Herndon VA 20171; GW0078700. I am writing to express my concerns about the special exception to the Groundwater Management Act requested by Chickahominy Power. I am specifically concerned about:

How can this benefit me  
Do we Really have enough water  
There are people already having  
problem of having low well water

I believe the DEQ should deny this special exception.

Thank you for your consideration.

Sincerely,

(Your signature) Eugene R. Crump, Jr.

Citizen name Eugene R. Crump, Jr.  
(Please print)

Your Telephone (804) 829 2182

Your Street Address 4340 Wayside Rd

City/ State/ Zip Charles City, Va. 23030

(Your Mailing address ( if different): \_\_\_\_\_)

(City/State/Zip \_\_\_\_\_)

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Virginia Department of Environmental Quality  
PO Box 1105, Richmond, VA 23219

Date: 1-27-2020

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I am writing in regards to the Chickahominy Power LLC application, 13800 Coppermine Rd Ste 115, Herndon VA 20171; GW0078700. I am writing to express my concerns about the special exception to the Groundwater Management Act requested by Chickahominy Power. I am specifically concerned about:

Will our wells eventually go dry  
Can you feel strongly this is the best  
thing for Charles City or would this  
be considered to be put in any county

I believe the DEQ should deny this special exception.

Thank you for your consideration.

Sincerely,

(Your signature) Judy H. Crump  
Citizen name Judy H. Crump  
(Please print)

Your Telephone (804) 829-2152

Your Street Address 4340 WAYSIDE RD

City/ State/ Zip CHARLES CITY, VA 23030

(Your Mailing address ( if different): \_\_\_\_\_)

(City/State/Zip \_\_\_\_\_)

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Office of Water Supply  
Virginia Department of Environmental Quality  
PO Box 1105, Richmond, VA 23219

Date: 1-26-2020

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13800 Coppermine Rd Ste 115, Herndon VA 20171; GW0078700. I am writing to express my concerns  
about the special exception to the Groundwater Management Act requested by Chickahominy Power. I  
am specifically concerned about:

water concern and  
air pollution water contamination  
Excessive water use causing  
well to go dry or low

I believe the DEQ should deny this special exception.

Thank you for your consideration.

Sincerely

( Your signature)

Citizen name

Andrew Jefferson Andrew Jefferson  
( Please print)

Your Telephone

(804) 829-5035

Your Street Address

10731 Barnetts Rd

City/ State/ Zip

Charles City 23030

(Your Mailing address ( if different):

(City/State/Zip

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Date: 1-26-2020

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I am writing in regards to the Chickahominy Power LLC application, 13800 Coppermine Rd Ste 115, Herndon VA 20171; GW0078700. I am writing to express my concerns about the special exception to the Groundwater Management Act requested by Chickahominy Power. I am specifically concerned about:

About The overall concern about in appow  
The ~~the~~ wording of such language That is  
Misleading and Think it is intentional to  
Deceive The citizens

I believe the DEQ should deny this special exception.

Thank you for your consideration.

Sincerely,

Joseph A. Crump  
(Your signature)

Citizen name Joseph A. Crump  
( Please print)

Your Telephone 804 1647-8262

Your Street Address 2302 Carlisle AVE

City/ State/ Zip 23231

(Your Mailing address ( if different): \_\_\_\_\_)

(City/State/Zip VA. 23231)

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Office of Water Supply  
Virginia Department of Environmental Quality  
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Date: 1-26-20

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I am writing in regards to the Chickahominy Power LLC application, 13800 Coppermine Rd Ste 115, Herndon VA 20171; GW0078700. I am writing to express my concerns about the special exception to the Groundwater Management Act requested by Chickahominy Power. I am specifically concerned about:

I have concerns that this  
will have negative effects on  
my health. I feel that this is  
not good for our county.

I believe the DEQ should deny this special exception.

Thank you for your consideration.

Sincerely,

( Your signature)

Pamela Ghee

Citizen name

Pamela Ghee

( Please print)

Your Telephone

(804) 829-6427

Your Street Address

6761 Salem Heights Dr.

City/ State/ Zip

Charles City Va 23030

(Your Mailing address ( if different): \_\_\_\_\_)

(City/State/Zip \_\_\_\_\_)

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Office of Water Supply  
Virginia Department of Environmental Quality  
PO Box 1105, Richmond, VA 23219

Date: 1-26-2020

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I am writing in regards to the Chickahominy Power LLC application, 13800 Coppermine Rd Ste 115, Herndon VA 20171; GW0078700. I am writing to express my concerns about the special exception to the Groundwater Management Act requested by Chickahominy Power. I am specifically concerned about:

My family members health. The water level. Will the water be affected for the people of Charles city to be able to drink & cook with.

I believe the DEQ should deny this special exception.

Thank you for your consideration.

Sincerely,

( Your signature) Donna Pettaway

Citizen name Donna Pettaway  
( Please print)

Your Telephone (804) 452-2508

Your Street Address 3102 Boston St.

City/ State/ Zip Hopewell, Va. 23860

(Your Mailing address ( if different): \_\_\_\_\_)

(City/State/Zip \_\_\_\_\_)

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To : Mr. Joseph Grist  
Office of Water Supply  
Virginia Department of Environmental Quality  
PO Box 1105, Richmond, VA 23219

Date: January 26, 2020

Dear Mr. Grist, Mr. Paylor and Members of the Water Control Board::

I am writing in regards to the Chickahominy Power LLC application,  
13800 Coppermine Rd Ste 115, Herndon VA 20171; GW0078700. I am writing to express my concerns  
about the special exception to the Groundwater Management Act requested by Chickahominy Power. I  
am specifically concerned about:

Contamination to my well water system  
Illnesses that may occur going forward with this project  
The water supply level in my well may be compromised if this project goes forward  
The lack of initial informed communications to residents  
so accurate decisions could be made regarding this project  
I believe the DEQ should deny this special exception.

Thank you for your consideration.

Sincerely,

(Your signature) Jacquelyn White

Citizen name Jacquelyn White  
(Please print)

Your Telephone (804) 829-2595

Your Street Address 10955 Shady Lane

City/ State/ Zip Charles City, VA 23030

(Your Mailing address ( if different): \_\_\_\_\_)

(City/State/Zip \_\_\_\_\_)

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To : Mr. Joseph Grist  
Office of Water Supply  
Virginia Department of Environmental Quality  
PO Box 1105, Richmond, VA 23219

Date: 01-27-20

Dear Mr. Grist, Mr. Paylor and Members of the Water Control Board::

I am writing in regards to the Chickahominy Power LLC application, 13800 Coppermine Rd Ste 115, Herndon VA 20171; GW0078700. I am writing to express my concerns about the special exception to the Groundwater Management Act requested by Chickahominy Power. I am specifically concerned about:

THE ADVERSE EFFECT THAT IT WOULD  
HAVE ON THE WATER AND QUALITY  
OF AIR ON OUR COUNTY.

I believe the DEQ should deny this special exception.

Thank you for your consideration.

Sincerely,

*Kermit White*

( Your signature)

Citizen name KEAMIT WHITE  
( Please print)

Your Telephone (804) 629-2595

Your Street Address 10955 SHADY LN

City/ State/ Zip CHARLES CITY, VA 23030

(Your Mailing address ( if different): \_\_\_\_\_)

(City/State/Zip \_\_\_\_\_)

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Office of Water Supply  
Virginia Department of Environmental Quality  
PO Box 1105, Richmond, VA 23219

Date: 1/27/2020

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I am writing in regards to the Chickahominy Power LLC application,  
13800 Coppermine Rd Ste 115, Herndon VA 20171; GW0078700. I am writing to express my concerns  
about the special exception to the Groundwater Management Act requested by Chickahominy Power. I  
am specifically concerned about:

I am <sup>against</sup> the power plant.  
Pollution is not wanted nor needed  
in this county nor our surrounding counties.  
Stop disturbing our communities with  
harmful emissions

I believe the DEQ should deny this special exception.

Thank you for your consideration.

Sincerely,

Shelia M. Quivers

(Your signature)

Citizen name Shelia M. Quivers  
(Please print)

Your Telephone ( ) -

Your Street Address 6304 Walnut Forest Ct.

City/ State/ Zip Richmond, VA 23231

(Your Mailing address ( if different): )

(City/State/Zip )

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To : Mr. Joseph Grist  
Office of Water Supply  
Virginia Department of Environmental Quality  
PO Box 1105, Richmond, VA 23219

Date: January 26, 2020

Dear Mr. Grist, Mr. Paylor and Members of the Water Control Board::

I am writing in regards to the Chickahominy Power LLC application, 13800 Coppermine Rd Ste 115, Herndon VA 20171; GW0078700. I am writing to express my concerns about the special exception to the Groundwater Management Act requested by Chickahominy Power. I am specifically concerned about:

air quality  
effect on water system  
storing of buried toxins

I believe the DEQ should deny this special exception.

Thank you for your consideration.

Sincerely,

Aurelia H. Terry

( Your signature)

Citizen name Aurelia H. Terry  
( Please print)

Your Telephone (804) 226-1343

Your Street Address 1203 Elmshadock Dr

City/ State/ Zip Henrico Va 23221

(Your Mailing address ( if different): \_\_\_\_\_)

(City/State/Zip \_\_\_\_\_)

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Office of Water Supply  
Virginia Department of Environmental Quality  
PO Box 1105, Richmond, VA 23219

Date: January 26, 2020

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The effects this will have on our  
water supply and the pollution  
that will be generated.

I believe the DEQ should deny this special exception.

Thank you for your consideration.

Sincerely,

Norma Adkins

( Your signature )

Citizen name Norma Adkins  
( Please print )

Your Telephone (804) 829-2092

Your Street Address 6220 Wyatt's Lane

City/ State/ Zip Charles City, VA 23030

(Your Mailing address ( if different ): \_\_\_\_\_)

(City/State/Zip \_\_\_\_\_)

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To : Mr. Joseph Grist  
Office of Water Supply  
Virginia Department of Environmental Quality  
PO Box 1105, Richmond, VA 23219

Date: 1/26/2010

Dear Mr. Grist, Mr. Paylor and Members of the Water Control Board::

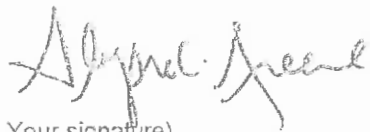
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- water level for those with wells
- pollution
- leakage

I believe the DEQ should deny this special exception.

Thank you for your consideration.

Sincerely,



( Your signature )

Citizen name ALYCIA C. GREENE  
( Please print )

Your Telephone (804) 813-0083

Your Street Address 10341 Roxbury Road

City/ State/ Zip CHARLES CITY, VA 23030

(Your Mailing address ( if different ): \_\_\_\_\_)

(City/State/Zip \_\_\_\_\_)

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Date: 1/26/20

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How this will affect the county &  
the safety of this community.

I believe the DEQ should deny this special exception.

Thank you for your consideration.

Sincerely,

(Your signature) Jocelyn Jones

Citizen name Jocelyn Jones  
(Please print)

Your Telephone (804) 920-7881

Your Street Address 10645 BARNHARTS RD

City/ State/ Zip Charles City VA 23030

(Your Mailing address ( if different): \_\_\_\_\_)

(City/State/Zip \_\_\_\_\_)

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Office of Water Supply  
Virginia Department of Environmental Quality  
PO Box 1105, Richmond, VA 23219

Date: 01/26/2020

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about the special exception to the Groundwater Management Act requested by Chickahominy Power. I  
am specifically concerned about:

I'm concerned about the water & air  
Pollution.

I believe the DEQ should deny this special exception.

Thank you for your consideration.

Sincerely,

(Your signature) William H. Lewis

Citizen name William H. Lewis  
(Please print)

Your Telephone (804) 829-2719

Your Street Address 10120 Kinages RD.

City/ State/ Zip Charles City, Va. 23030

(Your Mailing address ( if different): \_\_\_\_\_)

(City/State/Zip \_\_\_\_\_)

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Dear Mr. Grist, Mr. Paylor and Members of the Water Control Board::

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13800 Coppermine Rd Ste 116, Herndon VA 20171; GW0078700. I am writing to express my concerns  
about the special exception to the Groundwater Management Act requested by Chickahominy Power. I  
am specifically concerned about:

Water Contamination, Excessive  
Water Use, causing wells to  
go low / dry out, air pollution

I believe the DEQ should deny this special exception.

Thank you for your consideration.

Sincerely,

*Burnett Harris*

( Your signature)

Citizen name Burnett Harris  
( Please print)

Your Telephone (804) 586-2708

Your Street Address 5300 Wagside Rd

City/ State/ Zip Charles City Va 23030

(Your Mailing address ( if different): \_\_\_\_\_)

(City/State/Zip \_\_\_\_\_)

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form letters to a member of C5 at this meeting or before Feb 10 so we can submit it on your behalf.

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to [withdrawal.permitting@deg.virginia.gov](mailto:withdrawal.permitting@deg.virginia.gov)

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Thank you for taking time to comment upon this important matter!!! ~C5

To : Mr. Joseph Grist  
Office of Water Supply  
Virginia Department of Environmental Quality  
PO Box 1105, Richmond, VA 23219

Date: 1/27/20

Dear Mr. Grist, Mr. Paylor and Members of the Water Control Board::

I am writing in regards to the Chickahominy Power LLC application, 13800 Coppermine Rd Ste 115, Herndon VA 20171; GW0078700. I am writing to express my concerns about the special exception to the Groundwater Management Act requested by Chickahominy Power. I am specifically concerned about:

Water Contamination / Excessive  
Water Use causing Wells  
to go dry / Dry Out, Block  
Production

I believe the DEQ should deny this special exception.

Thank you for your consideration.

Sincerely,

Joseph Harris

( Your signature )

Citizen name

Joseph Harris

( Please print )

Your Telephone

(804) 981-9845

Your Street Address

5300 WAYSIDE ROAD

City/ State/ Zip

CHARLES CITY VA 23030

(Your Mailing address ( if different ):

(City/State/Zip

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To : Mr. Joseph Grist  
Office of Water Supply  
Virginia Department of Environmental Quality  
PO Box 1105, Richmond, VA 23219

Date: 1/26/2020

Dear Mr. Grist, Mr. Paylor and Members of the Water Control Board::

I am writing in regards to the Chickahominy Power LLC application,  
13800 Coppermine Rd Ste 115, Herndon VA 20171; GW0078700. I am writing to express my concerns  
about the special exception to the Groundwater Management Act requested by Chickahominy Power. I  
am specifically concerned about:

I am concerned about the  
pollution and the unclear water  
that this will incur.

I believe the DEQ should deny this special exception.

Thank you for your consideration.

Sincerely,

Sharon T. Marrow

(Your signature)

Citizen name Sharon T. Marrow  
(Please print)

Your Telephone (804) 829-5653

Your Street Address 10701 Sturgeon Pt. Rd

City/ State/ Zip Charles City, Va 23030

(Your Mailing address ( if different): \_\_\_\_\_)

(City/State/Zip \_\_\_\_\_)

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Office of Water Supply  
Virginia Department of Environmental Quality  
PO Box 1105, Richmond, VA 23219

Date: 1/26/20

Dear Mr. Grist, Mr. Paylor and Members of the Water Control Board::

I am writing in regards to the Chickahominy Power LLC application, 13800 Coppermine Rd Ste 115, Herndon VA 20171; GW0078700. I am writing to express my concerns about the special exception to the Groundwater Management Act requested by Chickahominy Power. I am specifically concerned about:

The effect of the power plant on  
the water servicing not only my  
hometown of Charles City but my  
current home in Virginia

I believe the DEQ should deny this special exception.

Thank you for your consideration.

Sincerely,

Rhonda Miles-Camp

( Your signature)

Citizen name Rhonda Miles-Camp  
( Please print)

Your Telephone (804) 387-2966

Your Street Address 7900 Turner Forest Place

City/ State/ Zip Henrico, VA 23231

(Your Mailing address ( if different): \_\_\_\_\_)

(City/State/Zip \_\_\_\_\_)

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To : Mr. Joseph Grist  
Office of Water Supply  
Virginia Department of Environmental Quality  
PO Box 1105, Richmond, VA 23219

Date: 1/26/2020

Dear Mr. Grist, Mr. Paylor and Members of the Water Control Board::

I am writing in regards to the Chickahominy Power LLC application, 13800 Coppermine Rd Ste 115, Herndon VA 20171; GW0078700. I am writing to express my concerns about the special exception to the Groundwater Management Act requested by Chickahominy Power. I am specifically concerned about:

being an elderly resident I am concerned about  
the water and air quality. I have never had  
problems with my water and I don't want it  
to start now.

I believe the DEQ should deny this special exception.

Thank you for your consideration.

Sincerely,

Dolores C. Brown

( Your signature)

Citizen name

Dolores C. Brown

( Please print)

Your Telephone

(804) 529-0264

Your Street Address

11001 Shady Lane

City/ State/ Zip

Charles City VA. 23030

(Your Mailing address ( if different): \_\_\_\_\_)

(City/State/Zip \_\_\_\_\_)

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To : Mr. Joseph Grist  
Office of Water Supply  
Virginia Department of Environmental Quality  
PO Box 1105, Richmond, VA 23219

Date: 1/26/2020

Dear Mr. Grist, Mr. Paylor and Members of the Water Control Board::

I am writing in regards to the Chickahominy Power LLC application,  
13800 Coppermine Rd Ste 115, Herndon VA 20171; GW0078700. I am writing to express my concerns  
about the special exception to the Groundwater Management Act requested by Chickahominy Power. I  
am specifically concerned about:

- ① water levels and quality
- ② Air pollution which will have effect on health
- ③ Clean living + comfort

I believe the DEQ should deny this special exception.

Thank you for your consideration.

Sincerely,

( Your signature)

Citizen name

LEONA Foster Leona Foster  
( Please print)

Your Telephone

804 829 2964

Your Street Address

10951 Shady Lane

City/ State/ Zip

Charles City, VA. 23030

(Your Mailing address ( if different):

(City/State/Zip

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To : Mr. Joseph Grist  
Office of Water Supply  
Virginia Department of Environmental Quality  
PO Box 1105, Richmond, VA 23219

Date: January 28, 2020

Dear Mr. Grist, Mr. Paylor and Members of the Water Control Board::

I am writing in regards to the Chickahominy Power LLC application, 13800 Coppermine Rd Ste 115, Herndon VA 20171; GW0078700. I am writing to express my concerns about the special exception to the Groundwater Management Act requested by Chickahominy Power. I am specifically concerned about:

The level of water in our  
wells, quality, air pollution  
and any additional expense  
that can occur.

I believe the DEQ should deny this special exception.

Thank you for your consideration.

Sincerely,

Teresa B. Adkins

( Your signature)

Citizen name Teresa B. Adkins  
( Please print)

Your Telephone (804) 829-5434

Your Street Address 10631 Shady Lane

City/ State/ Zip Charles City Co., Va 23030

(Your Mailing address ( if different): \_\_\_\_\_)

(City/State/Zip \_\_\_\_\_)

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To : Mr. Joseph Grist  
Office of Water Supply  
Virginia Department of Environmental Quality  
PO Box 1105, Richmond, VA 23219

Date: 1-27-2020

Dear Mr. Grist, Mr. Paylor and Members of the Water Control Board::

I am writing in regards to the Chickahominy Power LLC application, 13800 Coppermine Rd Ste 115, Herndon VA 20171; GW0078700. I am writing to express my concerns about the special exception to the Groundwater Management Act requested by Chickahominy Power. I am specifically concerned about:

Water table levels  
air pollution  
stirring up Kepone

I believe the DEQ should deny this special exception.

Thank you for your consideration.

Sincerely,

Sabrina Smith  
(Your signature)

Citizen name

Sabrina Smith  
(Please print)

Your Telephone (804) 295 5718

Your Street Address 8556 Roundabout Rd

City/ State/ Zip Henrico, VA 23231

(Your Mailing address ( if different): \_\_\_\_\_)

(City/State/Zip 23231 \_\_\_\_\_)

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To : Mr. Joseph Grist  
Office of Water Supply  
Virginia Department of Environmental Quality  
PO Box 1105, Richmond, VA 23219

Date: 1/27/20

Dear Mr. Grist, Mr. Paylor and Members of the Water Control Board::

I am writing in regards to the Chickahominy Power LLC application, 13800 Coppermine Rd Ste 115, Herndon VA 20171; GW0078700. I am writing to express my concerns about the special exception to the Groundwater Management Act requested by Chickahominy Power. I am specifically concerned about:

Air + water pollution  
and water level in the County  
could effect citizens health

I believe the DEQ should deny this special exception.

Thank you for your consideration.

Sincerely,

( Your signature) Charlotte Coy

Citizen name CHARLOTTE COY  
( Please print)

Your Telephone (804) 252- 7777

Your Street Address 10540 Shady Lane

City/ State/ Zip Charles City Co. Va. 23030

(Your Mailing address ( if different): \_\_\_\_\_)

(City/State/Zip \_\_\_\_\_)

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To : Mr. Joseph Grist  
Office of Water Supply  
Virginia Department of Environmental Quality  
PO Box 1105, Richmond, VA 23219

Date: 1-27-2020

Dear Mr. Grist, Mr. Paylor and Members of the Water Control Board::

I am writing in regards to the Chickahominy Power LLC application, 13800 Coppermine Rd Ste 115, Herndon VA 20171; GW0078700. I am writing to express my concerns about the special exception to the Groundwater Management Act requested by Chickahominy Power. I am specifically concerned about:

I AM CONCERNED ABOUT A NUMBER OF ENVIRONMENTAL ISSUES, WHICH INCLUDE GROUND WATER EXCEPTION, OF WHICH I AM AGAINST AS WELL AS OVER ALL AIR QUALITY AND LAND VALUES.

I believe the DEQ should deny this special exception.

Thank you for your consideration.

Sincerely,

( Your signature)

*Michael A Brown*

Citizen name

MICHAEL A. BROWN  
( Please print)

Your Telephone

(804) 829-5543

Your Street Address

10810 SHADY LANE

City/ State/ Zip

CHARLES CITY, VA 23030

(Your Mailing address ( if different):

(City/State/Zip

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To : Mr. Joseph Grist  
Office of Water Supply  
Virginia Department of Environmental Quality  
PO Box 1105, Richmond, VA 23219

Date: 01/27/2020

Dear Mr. Grist, Mr. Paylor and Members of the Water Control Board::

I am writing in regards to the Chickahominy Power LLC application, 13800 Coppermine Rd Ste 115, Herndon VA 20171; GW0078700. I am writing to express my concerns about the special exception to the Groundwater Management Act requested by Chickahominy Power. I am specifically concerned about:

as a citizen of Charles City County,  
I'm concerned about air quality  
issues, ground water issues and  
land values.

I believe the DEQ should deny this special exception.

Thank you for your consideration.

Sincerely,

(Your signature) Barbara A. Brown

Citizen name Barbara A. Brown  
( Please print)

Your Telephone (804) 809-5543

Your Street Address 10810 Shady Lane

City/ State/ Zip Charles City VA. 23030

(Your Mailing address ( if different): \_\_\_\_\_)

(City/State/Zip \_\_\_\_\_)

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Thank you for taking time to comment upon this important matter!!! ~C5

To : Mr. Joseph Grist  
Office of Water Supply  
Virginia Department of Environmental Quality  
PO Box 1105, Richmond, VA 23219

Date: 1/28/2020

Dear Mr. Grist, Mr. Paylor and Members of the Water Control Board::

I am writing in regards to the Chickahominy Power LLC application, 13800 Coppermine Rd Ste 115, Herndon VA 20171; GW0078700. I am writing to express my concerns about the special exception to the Groundwater Management Act requested by Chickahominy Power. I am specifically concerned about:

1) WATER CONTAMINATION 2) POLLUTION  
3) WILDLIFE PRESERVATION 4) JOB  
OPPORTUNITIES 5) WETLAND PRESERVATION  
6) THREATS TO MARINE LIFE

I believe the DEQ should deny this special exception.

Thank you for your consideration.

Sincerely,



( Your signature)

Citizen name

LaShawn D. Murdock  
( Please print)

Your Telephone (904) 829-6734

Your Street Address

10341 ROXBURY RD

City/ State/ Zip

CHARLES CITY, VA 23030

(Your Mailing address ( if different):

N/A

(City/State/Zip

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To : Mr. Joseph Grist  
Office of Water Supply  
Virginia Department of Environmental Quality  
PO Box 1105, Richmond, VA 23219

Date: 1/26/20

Dear Mr. Grist, Mr. Paylor and Members of the Water Control Board::

I am writing in regards to the Chickahominy Power LLC application, 13800 Coppermine Rd Ste 115, Herndon VA 20171; GW0078700. I am writing to express my concerns about the special exception to the Groundwater Management Act requested by Chickahominy Power. I am specifically concerned about:

The health of the people in the  
county, and whether the county  
residence taxes will elevate to  
help with maintenance of this plant.

I believe the DEQ should deny this special exception.

Thank you for your consideration.

Sincerely,

Andrew L. Choe

( Your signature)

Citizen name Andrew L. Choe  
( Please print)

Your Telephone (804) 829-5934

Your Street Address 10701 Smedley Lane

City/ State/ Zip Charlottesville VA 22902

(Your Mailing address ( if different): \_\_\_\_\_)

(City/State/Zip \_\_\_\_\_)

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To : Mr. Joseph Grist  
Office of Water Supply  
Virginia Department of Environmental Quality  
PO Box 1105, Richmond, VA 23219

Date: 1/27/20

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I am writing in regards to the Chickahominy Power LLC application,  
13800 Coppermine Rd Ste 115, Herndon VA 20171; GW0078700. I am writing to express my concerns  
about the special exception to the Groundwater Management Act requested by Chickahominy Power. I  
am specifically concerned about:

about air pollution  
water (contaminated)

I believe the DEQ should deny this special exception.

Thank you for your consideration.

Sincerely,

DeSean K. Walker

( Your signature)

Citizen name DeSean Walker  
( Please print)

Your Telephone (804) 829-5934

Your Street Address 1701 Shady Ln

City/ State/ Zip Charles City Va 23030

(Your Mailing address ( if different): \_\_\_\_\_)

(City/State/Zip \_\_\_\_\_)

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Office of Water Supply  
Virginia Department of Environmental Quality  
PO Box 1105, Richmond, VA 23219

Date: 1/26/20

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I am writing in regards to the Chickahominy Power LLC application, 13800 Coppermine Rd Ste 115, Herndon VA 20171; GW0078700. I am writing to express my concerns about the special exception to the Groundwater Management Act requested by Chickahominy Power. I am specifically concerned about:

how this could affect peoples  
health. It could cause people  
with cancer, heart disease etc. to  
get even sicker

I believe the DEQ should deny this special exception.

Thank you for your consideration.

Sincerely,

*Joyce L. Cohee*

( Your signature)

Citizen name Joyce L. Cohee  
( Please print)

Your Telephone (804) 829-5934

Your Street Address 10701 Shady Ln.

City/ State/ Zip Charlottesville Va. 22903

(Your Mailing address ( if different): \_\_\_\_\_)

(City/State/Zip \_\_\_\_\_)

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